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A Fragmenting Europe in a Changing World

Macroeconomic Conditions and Outlook

Coping (or not) with Change

Struggling with Constraints

Looking Outward: Western Disarray, China Rising

EEAG European Economic Advisory Group @ CESifo

EUROPE econPOL

The European Economic Advisory Group (EEAG) analyses key economic policy issues of common European concern. It aims to offer the public and policymakers research-based insights. Taking into account the variety of perspectives within Europe, the group fosters bridge-building between research and policy as well as across European countries.

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Foreword

Europe is becoming increasingly similar to the late Habsburg Empire, a powerful example of fragmentation and tendencies towards disintegration arising in multinational, multi-linguistic, and multi-ethnic integrated economic entities. To understand why and what the consequences may be, this year's report by the European Economic Advisory Group (EEAG) at CESifo looks inside EU member states, where much besides European integration has been happening, and outside Europe, where powerful economic and geopolitical challenges have shaken many European countries and sectors.

Technological and trade developments play an important role in shaping country-specific performances. **Chapter 2** reviews how, in specific cases, policy reactions and reform initiatives have – or have not – dealt adequately with the resulting challenges. Special emphasis is devoted to the Italian experience, which has been a laggard since the early 1990s, and the positive developments in Denmark, the Netherlands, Sweden, and other countries which all managed to break out of relative decline in the past. The chapter illustrates based on these country examples that the wealth of nations depends partly on circumstances beyond each countries' control, but carefully designed reforms do make a difference.

The European Union in its current incarnation incorporates only a fraction of important automatic stabilization mechanisms of well-functioning currency unions and federal states. This creates serious limitations on the ability to respond to severe asymmetric shocks. In **Chapter 3** we consider various ways of dealing with the constraints imposed by the incomplete currency union, both in a cooperative and non-cooperative spirit. Examples of the latter include proposals to introduce parallel currencies or fiscal monies and the use of cryptocurrencies. As the chapter shows, there is no compelling reason to believe that this would provide a viable solution for a country that is facing a protracted economic downturn.

The shocks that shape country experiences often originate from outside the European Union and in particular from the EU's integration with the rest of the world. Relations with the United States are increasingly dominated by conflicts over defence and trade, and the rise of China as a leading power in science and technology may threaten the competitiveness of European companies. Some Chinese foreign direct investments (FDI) was in the form of mergers and acquisitions of European companies and those involving high technology companies and sensitive public infrastructure have attracted public attention. In **Chapter 4** we show that these developments challenge the European Union to respond appropriately, but also offer ample opportunities for progress at both the member country and the EU level. For example, an enhanced mechanism for screening inward investments at the member state and at the EU level would be a good response to these dangers, alongside stronger spending on R&D in all member states. Moreover, the EU needs to strengthen strategic policies towards science and technology, balancing coordination from centralised investments in some areas with experimentation from individual member states' uncoordinated efforts in others.

As always, **Chapter 1** of the report contains an in-depth analysis of the economic situation of the European Union and other countries around the world, together with a forecast for the year ahead. After the unusually long expansion phase that followed the recent economic and financial crisis, the global economic momentum slowed noticeably last year. At present it is still unclear whether the global economy will experience a significant downturn or rather a gradual deceleration in 2019.

The European Economic Advisory Group at CESifo, which is collectively responsible for all parts of the report, consists of seven economists from six coun-

tries. This year the Group is chaired by Giuseppe Bertola (University of Turin). The other members are Torben M. Andersen (Aarhus University), John Driffill (Yale-NUS College), Harold James (Princeton University), Jan-Egbert Sturm (KOF Swiss Economic Institute, ETH Zurich), Branko Urošević (University of Belgrade) and myself (ifo Institute and University of Munich).

I would like to express my gratitude for the valuable assistance provided by the scholars and staff at CES and ifo who helped to prepare the report. This year's participants were Felix Hugger and Daniel Stöhlker (assistants to the group), Christian Grimme (economic forecast), Lisa Giani-Contini (editing), Annika Lorenz, Christiane Nowack, Christoph Zeiner (graphics), Katharina Pichler and Elisabeth Will (typesetting), and Ines Gross (cover). I also wish to extend my warmest thanks to Swiss Re for hosting our September meeting in Zurich.

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Munich, February 2019

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The views expressed in this report are those of the authors and do not necessarily reflect those of the institutions they are affiliated with.

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RECOMMENDATIONS FOR EUROPE

- A country's performance depends on circumstances beyond its control, as well as on government policies and national institutions. A crisis may trigger reforms, but it is essential to adopt policies that are appropriate in each country's specific circumstances. Such policies are not necessarily identical to those of other more successful countries, or those in force when the country was enjoying better times.

- Institutions play a crucial role in easing adjustment to new developments. If, at the country level, it is possible to even out and share gains and losses, this helps to avoid politico-economic stalemates and react constructively to structural change. Otherwise, as illustrated by Italy's experience, a country can find itself unable to pull itself out of prolonged stagnation.

- For institutional and political reasons, the sharing of gains and losses cannot take place through taxes and transfers across the borders of EU countries. This makes it all the more important to achieve it through private-sector instruments in common banking and financial markets that function effectively. Progress on this front tends to be slow for institutional and political reasons when, as in the case of public debt as a banking sector safe asset, it entails some fiscal elements.

- Countries may find themselves constrained by common yet incomplete monetary and financial markets, and try to relax those constraints via sophisticated financing schemes or the introduction of parallel currencies. If such attempts have fiscal implications, they run into the same issues as an overt violation of fiscal constraints.

- If they do not, as in the case of peer-to-peer currencies and lending, they may help economic activity, but have limited potential to improve the public sector's financial conditions. It is not obvious that public policy has a role to play in their development or regulation.

- Constraints should be faced, not circumvented, and trade-offs are inevitable. Countries that feel constrained by the eurozone's incomplete integration should not forget that having their own currencies did not always improve their circumstances in the past, and would not be a panacea in the future.

- The inward reorientation of US international policy implies that Europe needs to exploit synergies, such as those offered by both common trade and defence policy. The rise of China and the growth of trade and capital flows offers enormous potential for economic gains from both sides, it also requires Europe to react and develop a better adjustment capacity.

- The European Union should remain open to foreign investment, because economic linkages improve trust and reduce the likelihood of conflict, but it should also demand the reciprocal treatment of European investors in foreign countries, which is easier to obtain if Europe presents a united front and brings the large internal market to bear in negotiations. The new European framework for screening foreign direct investments in Europe is helpful in this respect, but clearer criteria are needed to prevent lobby influence, protectionism, and excessively bureaucratic and slow procedures.

- The rise of China as a leading power in science and technology may undermine European technological leadership in some sectors, but the European Union should not engage in races for dominance in particular technologies. Instead, it should advocate multilateral processes for setting standards, exert influence in that framework, and foster technological innovation by deepening internal capital markets and improving border crossing networks for data, communication, energy, and transport.

EXECUTIVE SUMMARY

The first chapter of this year's report reviews the politico-economic conditions and outlook, which is unusually uncertain in Europe at the moment. In 2019, the United Kingdom looks on its way to crashing out of the European Union, while the other large member countries (France, Germany, and Italy) are all experiencing serious politico-economic problems, and the European Parliament election campaign will feature strong nationalist and populist voices.

Fragmentation and a tendency towards disintegration are also emerging within member countries. Europe is becoming increasingly similar to the late Habsburg Empire: a powerful example of problems arising in multinational, multi-linguistic and multi-ethnic integrated economic entities. To understand why and what the implications may be, the other three chapters of this year's EEAG report look inside countries, where a great deal has been happening in addition to European integration, and outside Europe, where powerful economic and geopolitical challenges have shaken specific European countries and sectors.

One chapter discusses the role of technological and trade developments in shaping country performance within Europe, and studies how, in specific cases, policy reactions and reforms have or have not dealt adequately with the resulting challenges. The next chapter shifts the focus from national policies to the European level, highlighting how international finance could help EU member countries face shocks and a rapidly changing global environment, and how some countries may instead try and break out of what they perceive to be unfair constraints in an incomplete European integration framework. The final chapter considers a fast-changing global environment's implications for the European Union, focusing in particular on whether and how policymakers should deal with China's emergence as a leading power in science and technology.

CHAPTER 1
Macroeconomic conditions and outlook

After the exceptionally long expansion phase that followed the very unusual Great Recession, global economic momentum slowed noticeably last year. Persistently high debt levels, lingering structural problems, and strong political uncertainties led to a relatively small expansion in physical capital stock, with production bottlenecks starting to emerge at the cyclical peak in 2017. In addition, the more restrictive monetary policy pursued by the US Federal Reserve implies capital outflows and slower growth in some emerging economies.

Global economic momentum will continue to level off this year. In the United States, the strong impetus provided by tax cuts and additional government spending will abate, but private consumption will continue to benefit from the good labour market situation and real wage increases. Economic momentum is weakening in China, despite looser monetary policy and fewer measures to tackle financial and debt risks, and in Europe, where production capacity is scarce in important parts of the economy and political uncertainty is increasingly reducing companies' propensity to invest. As economic growth in many emerging markets will be dampened by liquidity outflows and currency devaluations this year, foreign trade will give weaker impulses to the European economy.

At present it is still unclear whether the global economy will experience a significant downturn or a gradual deceleration in 2019. To date, most indicators point to a relatively soft landing with locally limited turbulence. However, the risk of a rapid downturn has recently increased globally and within Europe. The slowdown was, and will continue to be particularly pronounced in the largest European economies, which all face specific challenges that burden their economic climate. The United Kingdom is unsteadily approaching Brexit, Italy and France urgently need to implement reforms that either the government or the electorate find unpalatable, and Germany's exports are threatened by slowing world trade and the looming implications of trade wars.

CHAPTER 2
Coping (or not) with change

Economic developments differ across member countries and dissatisfaction with the European Union is growing while populist and nationalistic policies are gaining ground. However, it is obviously simplistic to blame the EU's economic integration process for the dismal economic performance of certain countries and the lack of overall convergence. A given country's performance in a particular period of time can reflect shocks, which often originate from outside the EU, and particularly from the EU's integration with the rest of the world, in combination with country-specific policies and institutions that make it easier or more difficult to adjust to shocks.

There are thus many reasons why country performances may differ, and why some countries may perform better in some periods, and worse in others. However, there are systematic differences across countries, particularly in their ability to undertake requisite reforms in a timely manner. It is particularly important to understand the mechanisms that underlie country-specific performances. We focus on structural change and reform patterns across the EU-15 countries, because a lack of convergence across these countries after decades of integration is particularly striking, and study some of their experiences in detail.

When shocks hit, many economic, political, and institutional factors play a role in determining whether reforms are undertaken or not, and whether the country differences observed in economic performance cannot be attributed to a single factor like economic integration. The European integration process is both a response to various crises in the past and an opportunity to gain from new opportunities, which need to be managed by policies that spread the costs and benefits of change appropriately.

There is much to learn from Italy, which has been a laggard since 1992, when trade integration was fostered by the Single Market Programme in Europe and the Cold War globally, and information technology began to be broadly adopted. These developments affected all countries, but Italy appears to either have been hit more negatively or, and more interestingly, to have reacted less appropriately. Italy, of course, is not the only country to experience increasingly turbulent politics and persistent productivity slowdowns. We also review the more positive shock and reform experiences of countries that managed to break out of relative decline including Denmark, the Netherlands, Sweden, Finland, and Germany. These cases show that luck matters, but reforms do make a difference. Some political processes are naturally more cohesive and pragmatic. Adjustment appears to be easier for smaller and more homogenous countries, where policymakers can coordinate reactions to shocks that hit the country and sectors within it.

Reforms are not a one-off effort. Future changes may call for new responses, and there is no simple blueprint to follow. It is all too easy not only to disregard the drawbacks of reverting to past solutions, but also to contemplate simplistic would-be solutions. The wealth of nations depends on circumstances beyond their control, and on policy reactions that should react constructively to new challenges. Some countries' political processes are naturally more cohesive and pragmatic, while others have to work on theirs. However, all countries should be aware that finding ways to share gains and losses helps to avoid stalemates and adapt to change.

CHAPTER 3
Struggling with constraints

The EMU in its current incarnation incorporates only a fraction of the important automatic stabilisation mechanisms of currency unions and/or federal states that run smoothly. This imposes serious limitations on its members' ability to respond to severe asymmetric shocks. In countries facing little or no growth, resentment of the currency union and the European Union itself is starting to rise. In this chapter we consider different ways of dealing with the constraints imposed by the incomplete currency union, both cooperative and non-cooperative.

Full fiscal and political union is unrealistic, but deeper integration in specific areas may significantly improve risk sharing across the union. One important step would be the creation of a capital market union for financial products, something akin to the Single Market for consumer goods. This would both deepen European capital markets and allow investors to spread risk across the union. Another key area requiring further development is the banking union. We focus on the European banking charter and the creation of European safe assets. Both issues are contentious, but crucial, if financial risks are to be shared and markets completely integrated.

Given the current political climate in Europe, Europe-wide cooperative solutions, while highly desirable, may or may not be easy to implement (and may certainly take time). A country facing a protracted economic downturn may be tempted to stimulate its economy in non-standard ways. This chapter reviews selected proposals to introduce parallel currencies or fiscal monies, and to use peer-to-peer cryptocurrencies. There is no compelling reason to believe that this would provide a viable solution.

Various cooperative or non-cooperative exit scenarios are a more radical and practical way of breaking out of unpalatable constraints, and may easily lead to the dissolution of the EMU or of the European Union itself, with dire consequences. Countries that resent constraints should realise that they often represent real and inevitable trade-offs, and should consider both the positive and the many negative implications of breaking out of supranational policy frameworks.

CHAPTER 4
Looking Outward: Western Disarray, China Rising

The shocks that shape country experiences often originate from outside the European Union, and particularly from the EU's integration with the rest of the world. While the internal dynamics of the European Union influence progress towards and obstacles to ever closer union, the global environment for the European Union is changing fast, and external developments may call for new ways of organising the

European Union. Relations with the United States are increasingly dominated by conflicts over defence and trade, and the rise of China as a leading power in science and technology may threaten the competitiveness of European companies.

These developments challenge the European Union to respond appropriately, but also offer opportunities for progress at both the member country and the EU level. The growth of China expands markets for EU exports, and growing supplies of goods and services to the EU greatly improves consumer welfare. Progress, however, has uneven implications. There have been employment gains in some EU regions and industries (such as luxury goods, sophisticated machinery, and premium cars), but there have also been job losses and falling wages, especially for low-skilled workers.

Growth in trade has been accompanied by growing capital flows between China and the rest of the world. As China has diversified its portfolio of foreign assets away from the United States, some Chinese FDI has taken the form of mergers and acquisitions among European companies. Those involving high technology companies and sensitive public infrastructure have attracted attention. China has also made advances in the fields of science and technology, and has invested heavily in research and development. There is concern that Chinese ownership of high-tech firms and infrastructure may have been achieved with Chinese government support, in a less-than-transparent way, albeit by ostensibly private firms, and could be used to influence the European Union politically.

An enhanced mechanism for screening inward investments, at the member state and EU level (as recently proposed by the Commission), would be a good response to these dangers, alongside stronger R&D expenditure in all member states. In addition, the European Union needs to strengthen strategic policies towards science and technology, balancing coordination from centralised investments in some areas with experimentation from individual member states' uncoordinated efforts in others. A policy of adaptation and imitation in some fields should be considered as an alternative to maintaining leadership across the board. Rather than employing a policy that tries to pick winners, Europe needs to create an environment that promotes entrepreneurship and innovation.

Macroeconomic Conditions and Outlook

1.1 INTRODUCTION

Following the cyclical peak in 2017 and the associated increase in capacity utilisation, the global economic momentum slowed noticeably last year. As a result of persistently high debt levels, only partially resolved structural problems since the Great Recession and great political uncertainties, the expansion of the physical capital stock was relatively small and bottlenecks in production started to appear. The global economy has entered a cyclical cooling phase. In addition, the economy in some emerging markets is being adversely affected by capital outflows in the face of more restrictive monetary policy by the US Federal Reserve.

Global economic momentum will continue to level off this year. While the US economy is currently still benefiting from fiscal stimuli, the euro area and important Asian economies have already entered a cooling phase. In the United States, the high economic momentum seen last year should subside to normal levels in 2019. Whereas the strong impetus provided by tax cuts and additional government spending will abate, private consumption will continue to benefit from the favourable labour market situation and real wage increases. Economic momentum is also weakening in China, despite looser monetary policy and fewer measures to tackle financial and debt risks. In Europe, the high utilisation of macroeconomic capacities in important parts of the economy does not allow for major economic leaps. On the contrary, political developments such as the trade tensions with the United States, the possibility of a hard Brexit and simmering financial market risks in Italy are increasingly putting pressure on companies' propensity to invest. Economic growth in many emerging markets will be dampened by liquidity outflows and currency devaluations. As a result, foreign trade in the current year will give weaker impulses to the European economy.

At present it is still unclear whether the global economy will experience a significant downturn or a gradual deceleration this year. To date, signs of a relatively soft landing with locally limited turbulence predominate. However, the risk of a rapid downturn has recently increased. Overall, we forecast an increase in world production of 3.2 percent in 2018 and 3.0 percent in 2019.

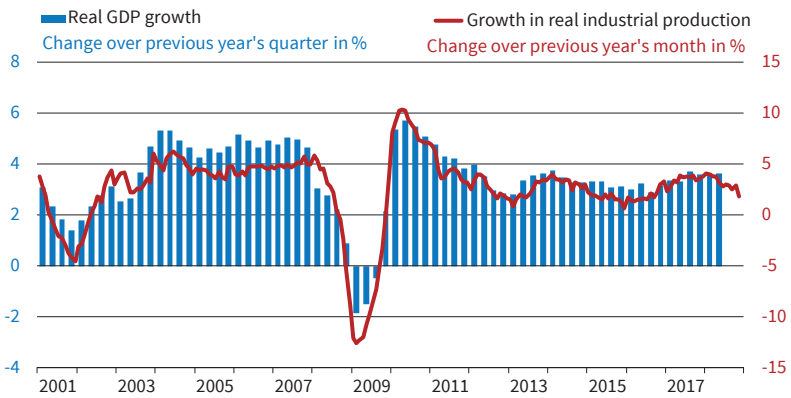
Within Europe, the slowdown was, and will continue to be particularly pronounced in the big four economies: namely Germany, the United Kingdom, France and Italy. Each of these countries faces specific challenges that are burdening their economic climate. While the United Kingdom is nervously preparing for Brexit, both Italy and France need structural reforms that are not considered necessary by either their governments or electorates. As an exporting nation, Germany is facing a slowdown in world trade and fears the consequences of the ongoing trade war.

1.2 CURRENT SITUATION

1.2.1 Global Economy

After a strong 2017, the global economy recorded weaker growth last year and industrial production in particular expanded more slowly (see Figure 1.1). Whereas industrial production in emerging and developing countries picked up again during the second half of last year, it almost stagnated in the advanced economies (see Figure 1.2). Despite the slowdown in industrial production, the global economy as a whole (and particularly in services) was still considered to be in an upswing. Overall capacity utilisation continued to rise in most countries.

Figure 1.1
World Economic Growth[a] and Growth in Industrial Production



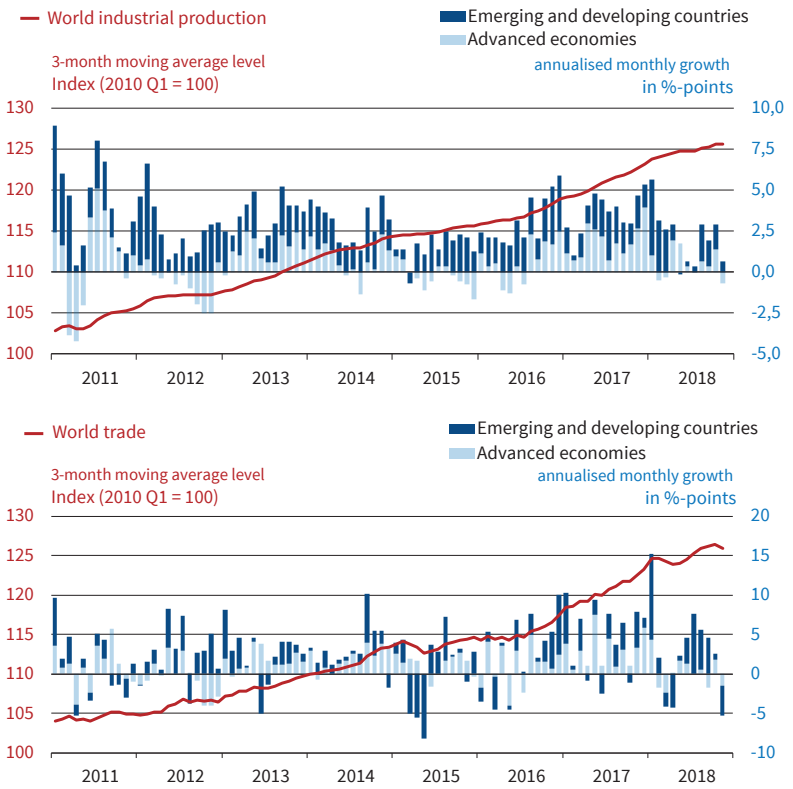
[a] Purchasing Power Parity (PPP) weighted aggregate year-over-year real GDP growth rate.
Source: IMF International Financial Statistics; CPB Netherlands Bureau for Economic Policy Analysis; last accessed on 3 February 2019.

EEAG (2019), "Macroeconomic Conditions and Outlook",
EEAG Report on the European Economy, CESifo, Munich, pp. 10–37.

World trade failed to keep up the pace set in 2017 last year too. This may already reflect a deterioration in the trade policy environment. Over the course of 2018, the US government took a number of protectionist measures. Customs duties were increased for a wide range of goods and import quotas were introduced. As a reaction to US measures, China, the European Union and some other countries imposed retaliatory tariffs on US products. However, the new trade barriers alone cannot fully explain the weak dynamics of world trade. Trade declined sharply at the beginning of 2018, while the aforementioned trade policy measures essentially did not came into force until summer. Moreover, the tariff increases by the United States since the beginning of 2018, and the resulting counter-tariffs levied by its trading partners include, at the current stage, goods worth around 450 billion US dollars, which still accounts for a relatively small 2.5 percent share of the total world trade volume. Finally, since the beginning of the trade conflict, the currencies of the economies affected by the US tariffs have mostly depreciated quite sharply against the US dollar. This depreciation, which is largely related to the continued tightening of US monetary policy and the weaker global economic outlook, counteracts the loss of price competitiveness associated with the tariff increase. Overall, the economic impact of the trade conflict has therefore been estimated to be low to date (see European Commission 2018, OECD 2018, Joint Economic Forecast 2018). This is also supported by the fact that trading activity in emerging Asia, which accounts for almost 70 percent of emerging market trade, remained buoyant during most of the year (see Figure 1.2). On the other hand, at the end of last year we have seen a clear decline in world trade and throughout 2018 there has been hardly any growth in trade activity in the advanced economies. The latter is largely due to a slowdown in intra-European cross-border trade. In addition to the weakening economic activity in some member states of the European Union, this slowdown is also related to temporary production disruptions in the German automotive industry.

Figure 1.2

Regional Contributions to Industrial Production and World Trade



Source: CPB Netherlands Bureau for Economic Policy Analysis; last accessed on 3 February 2019; EEAG calculations.

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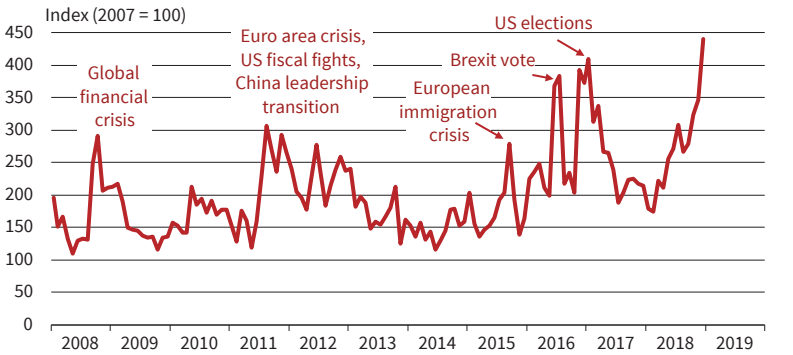
Figure 1.3

Global Economic Policy Uncertainty Index



Global Economic Policy Uncertainty (EPU) is calculated as the GDP-weighted average of monthly EPU index values for the United States, Canada, Brazil, Chile, the United Kingdom, Germany, Italy, Spain, France, Netherlands, Russia, India, China, South Korea, Japan, Ireland and Australia using GDP data in current prices from the IMF World Economic Outlook Database.

Source: Baker et al. (2016), www.policyuncertainty.com; last accessed on 3 February 2019.

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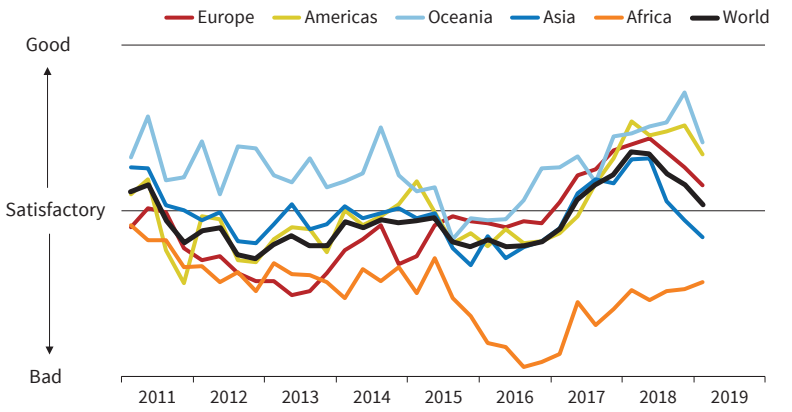
Although the direct impact of the global trade dispute has probably been quite low, it is one of the reasons why overall levels of economic policy uncertainty have been rising throughout the year and reached a new all-time high at the end of last year (see Figure 1.3). The associated uncertainties are slowing business investment, in terms of setting up or expanding export structures, for example. Other reasons for increased uncertainty, especially in Europe, include, for example, the increased likelihood of a so-called 'hard Brexit', uncertainty regarding the budgetary course of the Italian government that took office in May last year, and the riots in France. Another reason for higher uncertainty is that investors are increasingly worrying about the sustainability of high stock market valuations given a weaker global economic outlook and less expansionary monetary policies. In fact, stock prices have already substantially declined over the past year with negative feedback effects on the real economy.

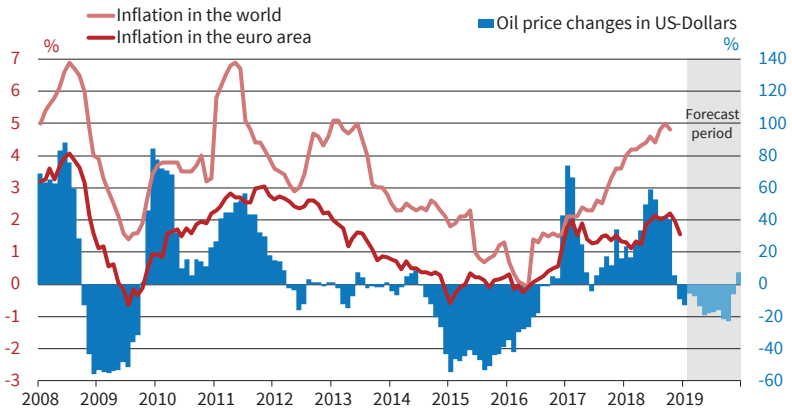
Against this background, the assessment of the world economic situation by experts has deteriorated particularly during the second half of last year (see Figure 1.4). Nevertheless, the overall sentiment is still positive. The decline is particularly driven by the assessments in Asia and Europe. Only Oceania did until recently buck the trend; it saw a clear improvement in the assessment of the economic situation during 2018. In particular Africa, but to quite some extent also the Americas stabilised at levels prevailing at the beginning of 2018. While this implies a clear booming economy in the Americas, the African economy remained subdued.

Figure 1.4
ifo World Economic Survey
Economic Situation



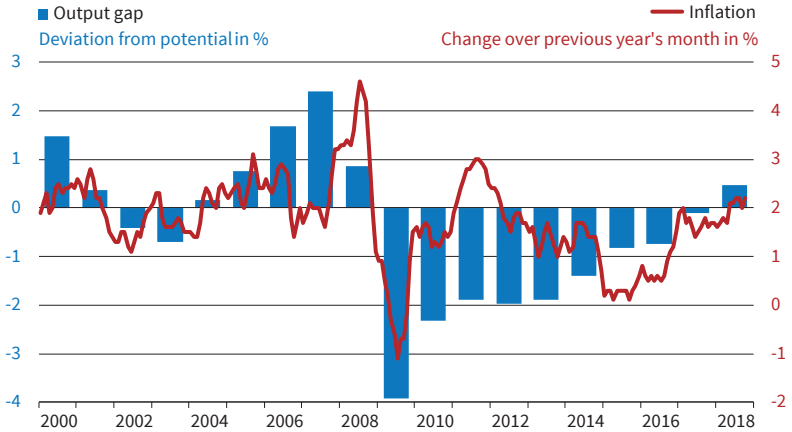
Source: ifo World Economic Survey I/2019. © CESifo

Figure 1.5
Inflation in the World and Oil Price Movements
Change over previous year's month in %



Forecast based on the assumption that oil prices remain steady from January 2018 onwards.
Source: IMF International Financial Statistics; last accessed on 3 February 2019; EEAG calculations. © CESifo

Figure 1.6
Output Gap and Inflation in Advanced Economies



Source: IMF World Economic Outlook, IMF International Financial Statistics; last accessed on 3 February 2019. © CESifo

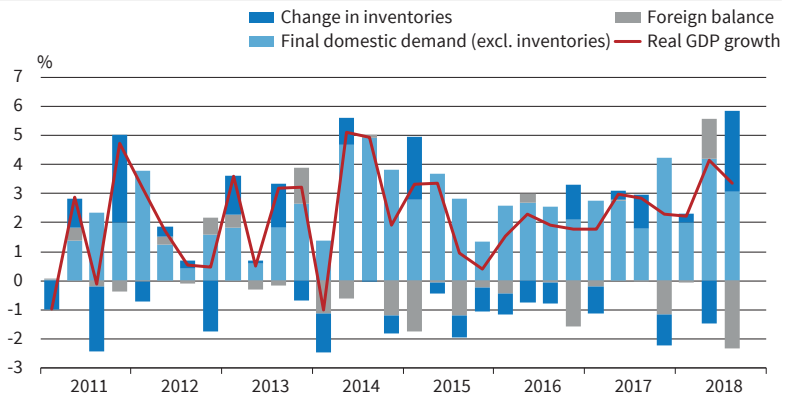
Inflation rates rose worldwide in the summer half of the year. This price surge can primarily be attributed to both the sharp rise in crude oil prices between July 2017 and September 2018 and to GDP surpassing its potential in the advanced economies (see Figu-

res 1.5 and 1.6). The surge in oil prices has been partly the result of the strong global economy in 2017 (see Grimme and Güntner, 2018 and Groen and McQuillan, 2018). But supply effects have also played a role: the sanctions against Iran related to the termination of the nuclear agreement in May last year resulted in significantly less Iranian crude oil entering the world market. In addition, oil supply from Venezuela and Mexico has also declined. These are additional reasons why the price of oil rose sharply into autumn 2018. The cooling down of the global economy and the lower-than-feared reduction in oil supply subsequently caused substantial fall in crude oil prices.

Figure 1.7

Contributions to GDP Growth[a] in the United States

Seasonally adjusted data



[a] Annualised quarterly growth.
Source: US Bureau of Economic Analysis, last accessed on 3 February 2019; EEAG calculations. © CESifo

Core inflation rates, which measure consumer price inflation excluding energy and food components, remained unchanged at around 1.5 percent in the advanced economies. These rates, however, reflect different developments. The core inflation rate in the United States has now risen to just under 2 percent, reflecting the wage pressure associated with strong employment growth. In the United Kingdom, the rate has been moving moderately below the 2 percent target of the British central bank for several months now, after higher price increases last year due to the strong depreciation of the British pound. In the euro area, core inflation remains at around 1 percent, and in Japan it is even below 0.5 percent. In the emerging markets, both core and actual inflation accelerated over the summer. The main reason for this, however, is the sharp rise in the Turkish inflation rates, which was accompanied by a sharp depreciation of the Turkish lira. The strong rise in energy prices from mid-2017 until autumn last year pushed headline inflation rates up to 2.1 percent and 2.5 percent in the industrialised and the newly industrialised countries last year respectively (see Table 1.A.1).

1.2.2 United States

In the United States, strong fiscal impulses generated a boost in economic activity, particularly during the summer half of 2018 (see Figure 1.7). The tax breaks introduced stimulated private consumption and investment. Private consumption spending also caught up strongly after a weak start in 2018 (see Figure 1.8). Gross fixed capital formation, and in particular non-residential investment, which built on the strong momentum of previous quarters, made a large contribution. While residential construction investments more or less stagnated, investments in infrastructure projects that were neglected for a long time, such as roads, energy and water supply, have increased again recently. The reallocation of resources within the public sector leads to stagnating expenditure for public goods such as education, health care and social security.

Over the course of the year, the contribution of foreign trade to overall growth was negative. Although the US dollar appreciated significantly against the currencies of its major trading partners, exports increased significantly. However, the increase was even more pronounced for imports. As a result, the trade balance continued to deteriorate. The strong economy, resulting in an annual GDP growth rate of 2.9 percent in 2018, is increasingly reaching its capacity limits.

On the labour market, a record low unemployment rate of 3.8 percent on average in 2018 and a sharp rise in job vacancies since the beginning of 2018 have led to a gradual acceleration in nominal wage growth. This gave further impetus to the already dynamic rise in prices. The core deflator of private consumer spending, the US Federal Reserve's preferred measure of inflation, peaked at 2.4 percent last summer, before gradually slowing to slightly below the target of 2 percent by the end of last year. Due to the rise in oil prices last year, the increase in consumer prices last summer was even as high as 2.9 percent. This resulted in an average inflation rate of 2.4 percent for 2018.

Meanwhile, the strong increase in employment has continued, whereas the labour force participation rate has continued to increase only marginally (see Figure 1.9). The unemployment rate, long-term unemployment and the so-called involuntary part-time employment continued to decline.

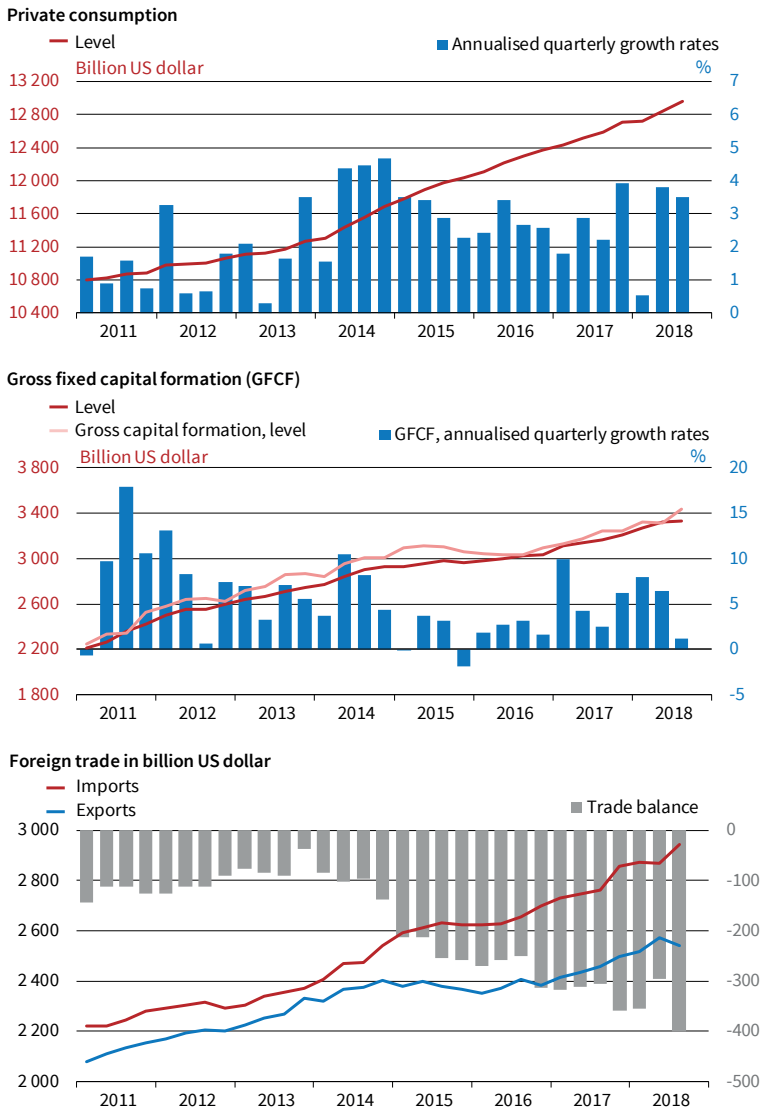
1.2.3 Asia

In *China*, the gradual cooling of the economy has continued into this winter. Concerns about the effects

Figure 1.8

Business Cycle Developments in the United States

In constant prices, seasonally adjusted and work-day adjusted



Source: US Bureau of Economic Analysis; last accessed on 3 February 2019.

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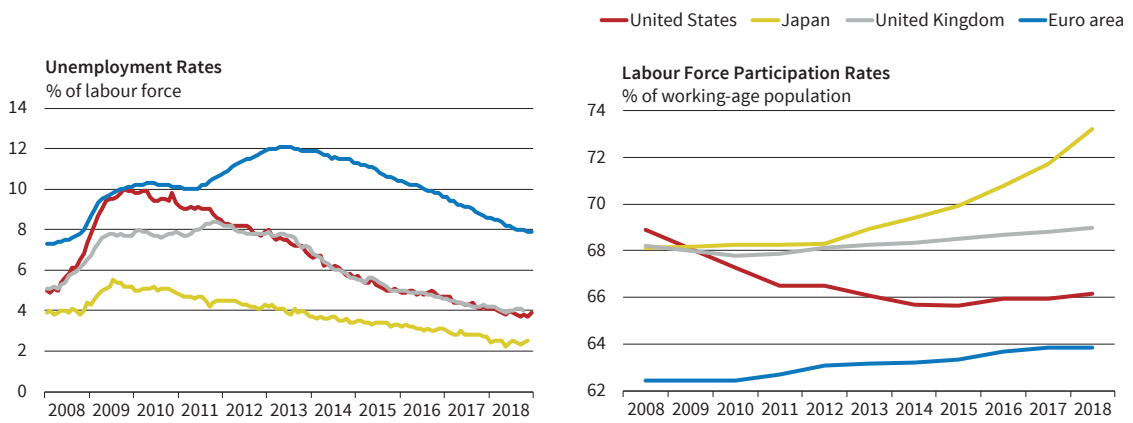
of the trade conflict with the United States on the export economy were prominent last year. Share prices have fallen throughout the year, and the mood among companies and consumers has deteriorated. Chinese economic policy intends to counteract this development. While the focus until spring 2018 was on curbing excessive credit growth, e.g., through tighter credit regulations, the financial system has since seen an increased liquidity supply. For example, the reserve retention rates were reduced in October for the third time in 2018. Fiscal counter-impulses are also increasingly being provided. Various taxes have been reduced, tax allowances increased and depreciation allowances extended. Further tax relief is planned for this year. In addition, Chinese policy has relieved domestic companies by lowering import duties and increasing value added tax (VAT) refunds for companies with high import content as a reaction to the US tariff measures. The depreciation of the yuan in summer has also partially offset the introduced US tariff increases. In addition, at least some Chinese companies are likely to react to the duty increases by circumventing duties. Overall,

Figure 1.9

Unemployment Rates and Labour Force Participation Rates



Source: OECD Main Economic Indicators; OECD Economic Outlook; last accessed 3 February 2019.

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the Chinese economy is expected to have expanded by 6.6 percent last year. Inflation turned out to be 2.1 percent last year.

The *Japanese* economy is suffering from the slowdown in China and the world economy in general. After a relatively high growth rate of 1.7 percent in 2017, last year's growth is projected to have fallen to 0.8 percent, whereby declining economic activity was reported in the first and third quarters. The strongest negative impulses came from both private residential and public investments. Employment has been rising strongly for some time and the unemployment rate has now fallen to a level last seen in the early 1990s. The strong labour market situation, combined with structural changes such as a better integration of women into the labour market and albeit moderately increasing immigration, has caused labour force participation rates in Japan to increase to unprecedented high levels. Despite the apparently high level of capacity utilisation in the economy as a whole, core inflation remained with levels of about 0.3 percent low. In particular, oil price developments managed to push the average overall inflation rate up to 1 percent last year.

After a weak 2017, the structural reforms implemented in *India*, like the introduction of a nationwide Goods and Service Tax system, an inflation-targeting framework, the Insolvency and Bankruptcy Code, and steps to liberalise foreign investment and make it easier to do business, and helped to push growth upward in 2018. These structural reforms strengthened both investment and private consumption. Furthermore, the increase in GDP growth from 6.2 percent in 2017 to an expected 7.6 percent last year reflects a rebound from transitory shocks, like the cash reform and massive monsoon rains in some regions. Both headline and core inflation have risen to levels of 4 percent as a result of a narrowing output gap and pass-through effects from higher energy prices and exchange rate depreciation.

GDP growth in the remaining East and Southeast Asian economies (Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore and Thailand) continued to register strong growth. The business cycles in most of these countries, however, have surpassed their peaks and growth rates tended to decrease over the course of last year. In particular, the cooling down of the global economy, and especially China, is weighing on these countries.

1.2.4 Latin America and Russia

The economic situation in Latin America (Brazil, Mexico, Argentina, Venezuela, Colombia, and Chile) has deteriorated during the course of 2018, partly as a result of the withdrawal of international financial investors. Brazil, Argentina and, above all, Venezuela were particularly affected due to country-specific problems. A nationwide truckers' strike disrupted production in Brazil. This temporary set-back, however, did not stop the overall economic recovery. In Argentina, a strong drought slashed the harvests of soybeans and corn, which are major export goods. Doubts on the government's ability to control the already high level of inflation triggered foreign investors to withdraw further from the country. The Argentinian currency depreciated sharply and, as a result, inflation rose even further, despite interest hikes by the central bank. All this led to a sharp contraction of real economic activity as of spring 2018. To prevent a stronger currency and economic crisis, Argentina applied for an exceptional access Stand-By Arrangement at the IMF. This was approved in June and implies access to 57 billion US dollars during three years. Driven by plummeting oil production, hyperinflation, and social instability, Venezuela's economy continued to decline for the fifth consecutive year.

Mexico, Colombia and Chile were significantly less affected by tighter financial conditions. In Mexico, the picture even brightened as the uncertainties surrounding US trade policy have been reduced by the signature of the trilateral USMCA free trade agreement; and the country could continue to benefit from the buoyant US economy. Slumping commodity prices and the slowdown in the world economy pushed growth in Colombia and Chile down a gear in 2018.

In Russia, GDP rose by 1.6 percent in 2018. Improving consumer demand, lower inflation and looser monetary policy together with improved oil prices, and the associated increase in export earnings, laid the foundation for this growth. Investments also accelerated in the first half of the year. Since summer, inflation has been picking up again, triggering two interest rate hikes by the Russian central bank to date. At the same time, growth rates have started to decline. Falling oil prices and a VAT increase by 2 percentage points in January are exerting downward pressure on the economy once again.

1.2.5 European Economy

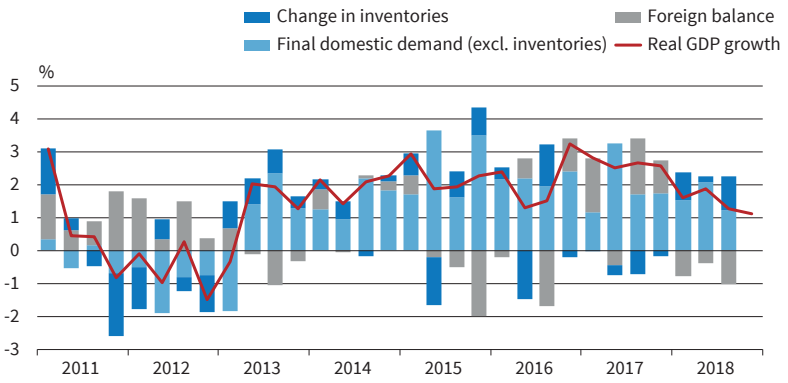
Cyclical Situation

After five consecutive quarters of annualised GDP growth rates well above 2 percent, the European economy shifted down a gear at the beginning of 2018. Annualised growth rates stayed below 2 percent, but still around, and even above potential during the first half of 2018. The European economy suffered a further setback in the second half of the year (see Figure 1.10). The weak growth in the third quarter is mainly attributable to special effects in German automobile production. The new Worldwide Harmonized Light Vehicles Test Procedure (WLTP) has been in force in the European Union since September. As many vehicle types had no certification as of the reporting date, inventories were drastically increased and production was even temporarily interrupted.

Figure 1.10

Contributions to GDP Growth[a] in the European Union

In constant prices, seasonally adjusted and work-day adjusted



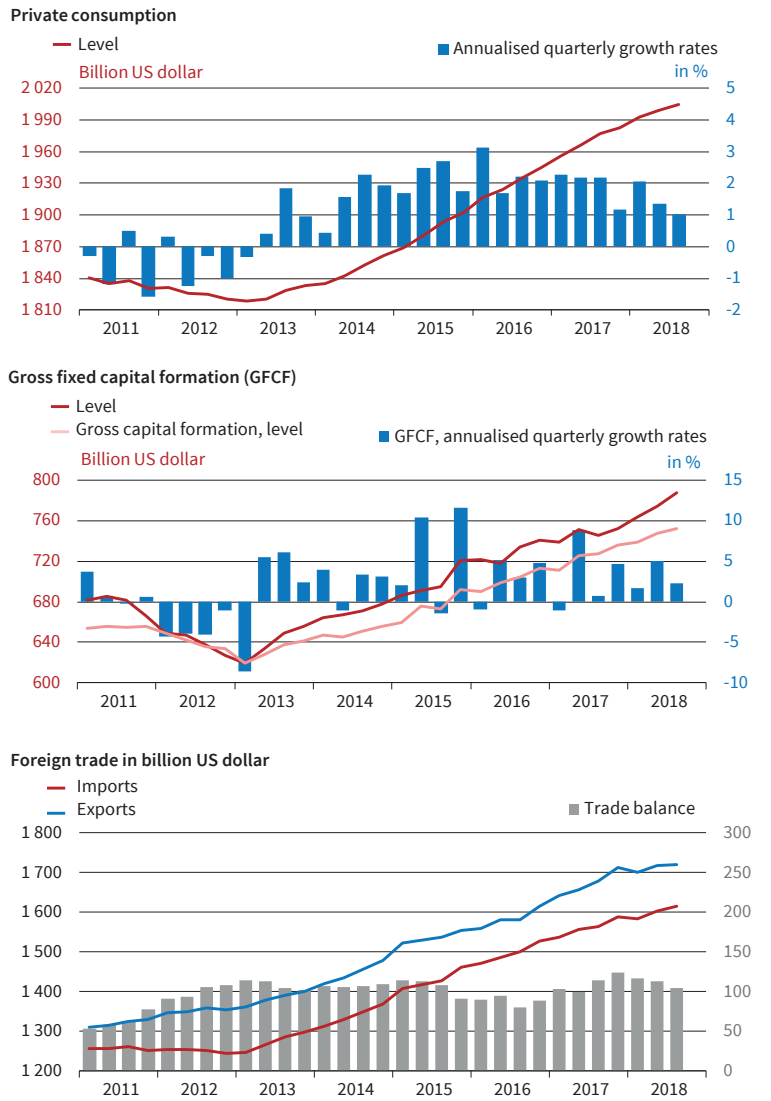
[a] Annualised quarterly growth. The investment and imports data for the 2nd quarter of 2015 are corrected for a 22 billion euro purchase of intellectual property from abroad by a subsidiary of a large international company resident in the Netherlands (see Statistics Netherlands, 2018).

Source: Eurostat; last accessed on 3 February 2019; EEAG calculations. © CESifo

Figure 1.11

Business Cycle Developments in the European Union

In constant prices, seasonally adjusted and work-day adjusted



[a] The investment and imports data for the 2nd quarter of 2015 are corrected for a 22 billion euro purchase of intellectual property from abroad by a subsidiary of a large international company resident in the Netherlands (see Statistics Netherlands, 2018).

Source: Eurostat, last accessed on 3 February 2019. © CESifo

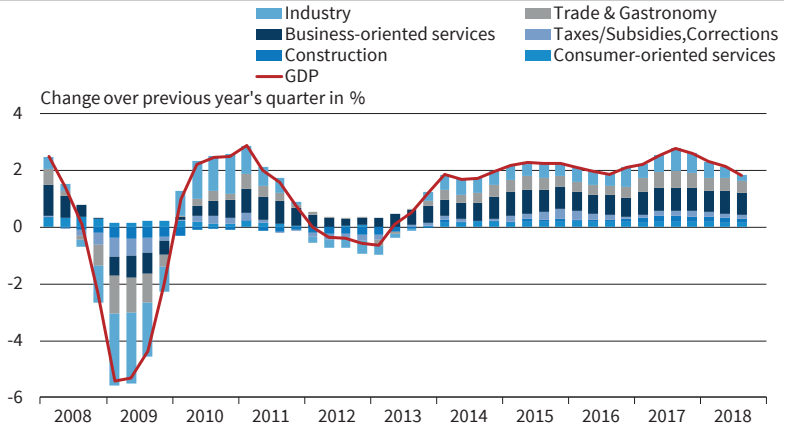
Although both private consumption and investment levelled off, both still continued to support overall growth (see Figure 1.11). Assessments of order backlogs and incoming orders by firms, particularly in the export sector, have deteriorated since the beginning of the year. The ongoing discussion about the introduction of tariffs on certain European export goods and about the EU's future economic relation with the United Kingdom is likely to have weighed on the mood of companies in the euro area and increased uncertainty. In addition to the aforementioned special effects in the German automotive sector, all this probably contributed to a weaker increase in investments and a flattening of exports. The latter may also be due to the global slowdown. This particularly dampened foreign trade on balance. This means that the boom phase supported by exports, which the euro area was experiencing especially in 2017, has come to an end for the time being.

The flattening of exports also implies that the demand for industrial goods has weakened. This is not only supported by the strong expansion of inventories since the beginning of the year, but a look at the production side of the system of national account reveals that the weakening of the European economy is indeed largely driven by the lowering of the growth contribution of the industry sector (see Figure 1.12). From a business cycle perspective this is not unusual: industry is the sector that delivers the most volatile contribution to overall growth and is generally considered to be the driver of the business cycle, both during up- and downturns.

As the economy weakened, the decline in the unemployment rate in the European

Figure 1.12

Sector Contributions to GDP Growth[a] in the European Union



[a] Gross domestic product at market prices (prices of the previous year). Annual percentage change and growth contributions. Sectors are sorted by the volatility in their growth contributions.
Source: OECD, last accessed on 3 February 2019; EEAG calculations.

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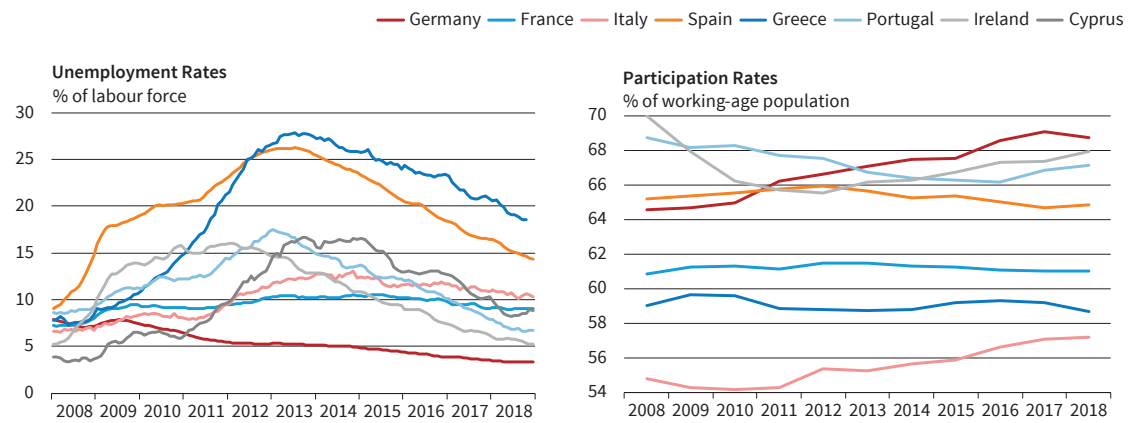
Union started to flatten out, reaching the lowest level registered this century at 6.7 percent in November 2018. Although differences across member states are diminishing, but they are still large (see Figure 1.13). In Spain, 14.7 percent of the employment force was registered as unemployed in November, while the rates in Germany (3.3 percent) and the Netherlands (3.5 percent) were much lower. As one of the few exceptions, the unemployment rate in Italy started to rise again and reached 10.5 percent in November. Differences in unemployment rates are not only large, participation rates also vary substantially across member states. Although there has been a slight tendency for participation rates to rise in recent years, the across-country variation has thereby hardly fallen. Italy remains a country with a relatively low participation rate; while the opposite is the case for Germany.

During the first half of 2018 in particular, employment levels in the European Union as a whole increased substantially at an annualised growth rate of 1.7 percent. In the euro area employment developments were very similar (1.6 percent). Employment growth appears to have abated somewhat during the second half of the year, although the underlying trend still appears to be positive.

During the upswing that Europe has been experiencing since 2014, the additional job positions were largely created in the business-oriented services sector. The employment growth rate in this part of the economy has been about twice as high as the overall level. Whereas employment growth rates have all been around 6 percent for construction, wholesale trade, retail trade and gastronomy as well as other consumer-oriented services, in net terms hardly any new positions have been created in the industry sector (see right hand side of Figure 1.14). Nevertheless, cumulative production growth in industry has been strong during the same period. Growth in industry has been achieved through higher labour productivity (see lower part of Figure 1.14). On the other hand, labour productivity in the producer- and consumer-oriented services have basically stagnated for at least 10 years now. Given the increased weight of these sectors in the overall economy, the frequently discussed slower growth of productivity ('secular stagnation debate') can partly be explained this way, i.e. in the European case the question needs to be answered as to why these service sectors have hardly reported any productivity gains since the Great Financial Crisis. Whether this is a measurement problem, or whether it is simply difficult to achieve (further) productivity gains in these sectors remains an open question.

Figure 1.13

Unemployment Rates and Participation Rates in Selected Euro Area Countries



Source: Eurostat; OECD Economic Outlook; last accessed 3 February 2019.

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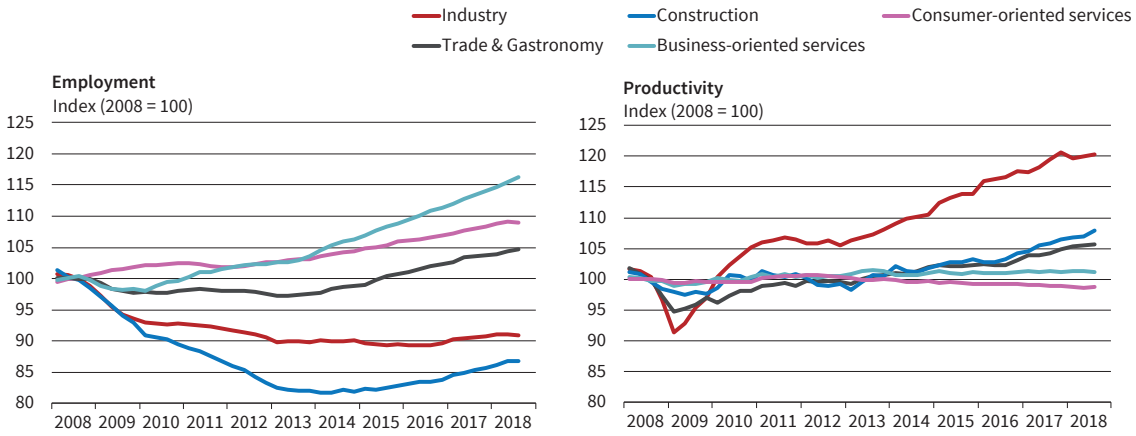
Figure 1.14

Employment and Productivity Developments of Sectors in the European Union



Source: OECD, last accessed 3 February 2019; EEAG calculations.

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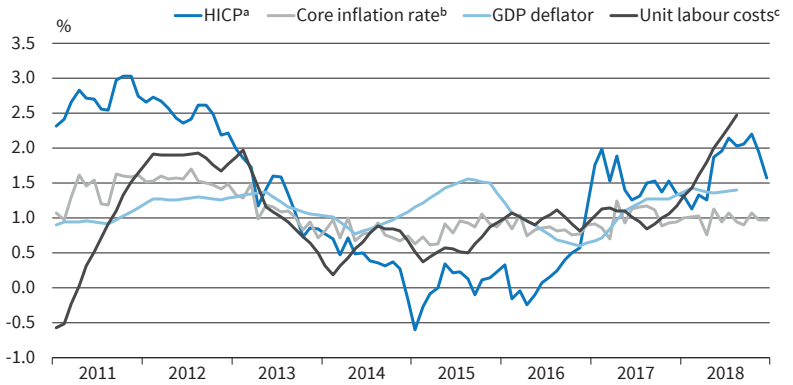
Even though capacity utilisation has not increased further during the year, it stands well-above normal. Supply-side bottlenecks continue to play a role in many industries. According to European Commission surveys, manufacturing companies are still reporting production constraints due to a shortage of skilled labour and technical capacity. These production constraints are particularly pronounced in Germany, the Netherlands and France.

Although unemployment is still worryingly high in some countries, the general shortage in the European labour market is increasingly reflected in wages. Unit labour costs started to grow more dynamically last year (see Figure 1.15 and Table 1.1). Inflation in the euro area has also increased, particularly during summer 2018. Between July and October it reached its highest level since 2012 with a rate of 2.2 percent. Energy prices were the decisive factor for the strong upswing and also explain the slight reduction at the end of the year. Core inflation in the euro area has been hovering slightly above 1 percent for some time now.

Figure 1.15

Price Developments in the Euro Area

Change over previous year's month



[a] Harmonised Index of Consumer Prices (HICP). [b] HICP excluding energy, food, alcohol and tobacco.
[c] Nominal compensation of employees per unit of real GDP.

Source: Eurostat; last accessed on 3 February 2019.

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Developments in Selected Member States

The *German* economy is cooling down. Part of the weakness can be explained by supply-side difficulties. In addition to the strike and sickness-related production stoppages in the first few months of 2018, the summer also saw serious problems for the German automotive industry. The certification of new cars in accordance with the new WLTP exhaust emission procedure, which was introduced in the European Union on 1 September 2018, is the main reason for the decline in overall economic production in the third quarter. However, the high overall economic capacity utilisation, which was accompanied by a pronounced shortage of manpower and delays in supply chains, also stood in the way of a more vigorous expansion of production, which could have been expected given the high order backlog in German industry at the beginning of 2018. In addition, the overall picture of economic indicators suggests that demand for German products has declined during the year. New orders in the manufacturing sector, both from Germany and abroad, fell throughout 2018 and the export of industrial products stagnated. Falling export expectations and a declining export climate indicate that foreign demand for German goods has weakened significantly, especially compared to the boom year 2017. However, there are no indi-

Table 1.1

Labour Costs[a]

	Compensation per employee[b]			Real compensation			Labour productivity			Unit labour costs			Relative unit labour costs[d]			Export performance[e]		
	1999–2013	2014–2018	2018	1999–2013	2014–2018	2018	1999–2013	2014–2018	2018	1999–2013	2014–2018	2018	1999–2013	2014–2018	2018	1999–2013	2014–2018	2018
Germany	1.3	2.6	2.9	0.4	0.9	0.7	0.6	0.8	0.3	0.8	2.1	3.0	– 1.2	1.2	3.3	0.5	0.1	– 0.9
France	2.4	1.4	2.2	1.0	0.7	0.4	0.7	0.7	0.7	1.6	0.7	1.6	– 0.1	– 0.3	1.5	– 1.4	– 0.2	0.0
Italy	1.8	0.7	1.7	– 0.1	– 0.2	– 0.7	– 0.3	0.1	0.2	2.3	1.1	1.8	0.5	0.3	2.4	– 2.8	– 0.4	– 3.0
Spain	2.4	0.7	1.4	0.2	0.1	– 0.3	0.6	0.5	0.4	2.1	0.5	1.5	0.4	– 0.3	1.7	– 0.6	0.2	– 1.4
Netherlands	2.5	1.2	1.6	0.7	0.2	– 1.1	0.7	0.9	0.2	1.8	0.4	1.7	0.1	– 0.6	1.7	– 0.2	0.3	– 0.4
Belgium	2.5	1.1	2.0	0.9	– 0.3	– 0.6	0.8	0.5	0.3	1.9	0.5	1.5	0.3	– 0.4	1.8	– 1.0	0.9	0.1
Austria	2.0	2.0	2.4	0.5	0.3	0.4	0.7	0.6	0.9	1.4	1.7	2.0	– 0.3	0.4	1.1	– 0.5	– 0.3	0.1
Finland	2.8	0.8	1.7	1.2	– 0.5	– 0.7	0.8	0.8	0.4	2.0	0.0	1.4	– 0.3	– 0.3	2.1	– 1.4	– 0.7	– 0.5
Greece	2.6	– 0.7	1.8	0.7	– 0.4	– 1.2	0.7	– 0.4	0.5	2.7	0.2	2.4	0.6	– 0.2	3.5	– 1.0	1.1	4.6
Ireland	3.3	1.7	2.8	1.6	0.3	1.5	2.0	6.7	2.7	1.6	– 4.3	0.0	0.2	– 5.5	0.4	1.8	9.3	2.2
Portugal	2.5	0.8	1.9	0.3	– 0.7	– 0.6	1.0	– 0.1	0.0	1.8	1.4	2.4	0.0	0.6	2.1	– 0.2	1.9	2.9
Slovakia	6.1	3.6	6.2	3.1	3.0	1.2	3.3	1.5	2.3	2.3	2.6	4.4	1.9	1.4	3.1	4.3	0.7	1.7
Slovenia	5.3	2.6	4.4	1.9	1.4	0.5	1.8	1.7	1.7	3.4	1.2	3.1	– 0.1	0.2	2.7	0.9	3.2	4.4
Estonia		5.2	5.1	– 4.9	2.7	1.6	3.6	1.8	2.4	4.7	4.0	4.8	2.1	3.8	5.1	1.1	– 0.1	0.9
United Kingdom	3.4	1.9	2.0	1.5	0.3	0.0	1.0	0.5	0.2	2.2	1.3	2.1	– 1.1	– 0.4	1.5	– 1.5	– 1.6	– 1.6
Sweden	3.4	2.7	4.1	1.9	0.7	0.5	1.3	1.1	0.9	2.2	1.8	3.3	0.4	– 2.4	– 3.4	– 0.7	0.5	0.1
Denmark	2.9	1.6	2.3	0.9	0.8	1.3	0.9	0.5	– 0.4	2.1	1.2	2.8	0.2	0.5	2.8	– 0.5	– 1.2	– 3.7
Poland	4.9	4.4	7.2	1.9	3.6	3.8	3.2	2.8	4.2	2.1	1.9	2.9	– 0.5	0.7	2.1	2.3	3.7	2.8
Czech Republic	4.5	4.7	7.8	2.8	3.1	2.9	2.3	2.3	1.6	2.0	2.8	6.7	2.4	2.0	8.9	3.4	1.9	0.7
Hungary	6.4	4.1	10.9	1.5	1.2	– 0.4	2.0	0.9	2.7	4.9	3.3	7.9	1.7	0.8	4.2	3.5	2.9	4.7
Switzerland	1.4	0.2	1.5	0.7	0.5	– 0.5	0.6	0.6	1.9	1.0	– 0.3	– 0.7	1.1	– 0.1	– 4.6	– 0.2	– 2.9	– 2.2
Norway	4.5	2.5	3.1	– 0.1	1.3	– 3.4	0.5	0.8	– 0.1	4.1	1.8	3.1	2.9	– 3.1	0.5	– 3.4	– 2.1	– 2.2
Iceland	6.1	6.9	4.5	1.3	4.1	4.7	1.6	1.7	1.5	4.9	4.4	1.5	– 1.4	8.8	– 3.8	0.7	2.4	– 0.2
United States	3.1	2.4	3.0	1.2	0.8	0.2	1.6	0.7	1.3	1.5	1.8	1.6	– 1.6	3.8	– 1.4	– 1.1	– 1.0	– 0.2
China													3.9	2.4	2.7	9.3	0.6	1.2
Japan	– 0.7	0.8	0.8	0.4	0.0	0.9	0.9	0.0	– 1.0	– 1.2	1.0	2.0	– 2.5	– 0.6	1.1	– 2.8	0.4	– 2.3

[a] Growth rates for the total economy; [b] Compensation per employee in the private sector; [c] Compensation per employee in the private sector deflated by the GDP deflator; [d] Competitiveness: weighted relative unit labour costs; [e] Ratio between export volumes and export markets for total goods and services. A positive number indicates gains in market shares and a negative number indicates a loss in market shares.

Source: OECD Economic Outlook No. 104, November 2018.

cations to date that the trade conflict originating in the United States had a negative impact on German exports; as European sales markets were primarily responsible for the export weakness.

Although employment and labour income continued to expand strongly, private consumption weakened, as indicated by declining retail sales and new vehicle registrations since the spring. On the other hand, corporate investment, which continued to grow despite problems in the German industry, proved fairly robust in 2018. Strong capacity constraints and favourable financing conditions appear to have contributed to this development, although growth rates in the first three quarters of 2018 were somewhat weaker than in 2017. Investments in residential construction also expanded strongly last year. High demand for residential space in conurbations, low interest rates and good income prospects boosted the construction sector. The high level of over-utilisation of capacities evidently did not stand in the way of a continuous expansion of construction output, although it did cause construction prices to rise sharply.

Last year, the economic development of the *United Kingdom* was characterised by both weather-related disruptions early in the year and, more importantly, uncertainty over Brexit. The unresolved situation has had a negative impact on the investment activity of companies. The willingness of firms to invest in an environment in which economic arrangements between the United Kingdom and the rest of the European Union remain unclear has deteriorated markedly. Despite attempts to replenish stocks before the supply bottlenecks feared in the case of a hard Brexit, and the relatively weak value of the British pound, international trade has also lost considerable momentum already. The core inflation rate declined during 2018: on the one hand, the pass-through effects of the pound depreciation in 2016 did fade. On the other hand, however, growth has been falling below potential (which itself has been reduced by the Brexit decision), resulting in weaker price pressure. Headline inflation did not fully follow this decline in core inflation because of energy prices, which continued to rise until October of last year. Headline inflation has edged down to 2.3 percent in 2018, from 2.7 percent in 2017.

The economy of *France* lost momentum last year. In addition to weaker exports and investments, this was attributable to a noticeably slower growth in consumption. During the first part of the year, the latter was related to extensive labour disputes in the transport sector. Since November, the yellow vest (gilets jaunes) movement has not only challenged the ongoing structural reforms that were set in motion in 2017, the associated unrests have also damaged retail trade sales. Although most economists would agree that the implemented reforms have the potential to reduce high structural unemployment and increase potential GDP growth, and the yellow vests movement was initially directed only against high fuel prices and the planned eco-tax on diesel, it increasingly turned into a protest against the government's entire reform agenda. All in all, each of the major demand compo-

nents underlying GDP weakened in 2018 compared with the previous year, which has resulted in a growth rate of 1.5 percent.

In *Italy*, economic growth also slowed in 2018. After 1.7 percent in 2017, the Italian economy is projected to have grown by only 0.8 percent in 2018. More specifically, the expansion of production was dampened by almost stagnating exports. Of the broader demand components, only investment provided a relatively strong impetus for overall growth. It was supported by tax incentives and slowly rising bank loans to non-financial corporations. The amount of non-performing loans on banks' balance sheets has declined significantly over the past two years and the ratio of new non-performing loans to outstanding loans has declined. Italian systemic banks appear to be well capitalised, while some smaller banks are still struggling. Furthermore, the share of Italian government bonds in banks' total assets has risen from 9 to 10 percent since the end of 2017, strengthening the link between the state of public finances and bank health. This is aggravated by the uncertain fiscal stance of the new government, which took office in June. If all new Italian government's plans, announced after it came to power, were to be implemented, a heavy burden would be placed on the government budget. This has already led to a sharp increase in risk premiums on Italian government bond yields.

Whereas the four largest countries in the European Union saw their growth rates decline to 1.5 percent or lower, all other EU member states apart from Denmark and Belgium kept growing at rates of 2 percent or (well) above. This also holds for the former crisis countries, Spain, Ireland, Portugal, Greece, and Cyprus. In addition, Greece was finally able to pull itself out of its trough last year and appears to be on a weak, but stable recovery path. The improved labour market situation and structural reforms implemented, aimed at increasing flexibility of product and labour markets, laid the foundation for relatively strong domestic demand in each of these economies. Furthermore, as interest rates have been low for several years now, governments' interest payments on public debt declined, as old debt was continuously rolled over to newly issued bonds. Governments took advantage of the option of bringing an end to austerity without incurring increases in public deficits. A more expansionary fiscal stance was another reason why growth remained relatively high. Insofar as growth weakened, this was largely due to a lowering of external, and particularly of European demand.

The Central and Eastern European countries continued on their growth path last year, albeit at a slower pace, and registered growth rates of between 3 percent and 5 percent in 2018. Whereas external demand was weakening, domestic demand remained robust almost everywhere. With the exception of Estonia, unemployment rates in other central and eastern European countries kept declining last year, but at a slower pace than in 2017.

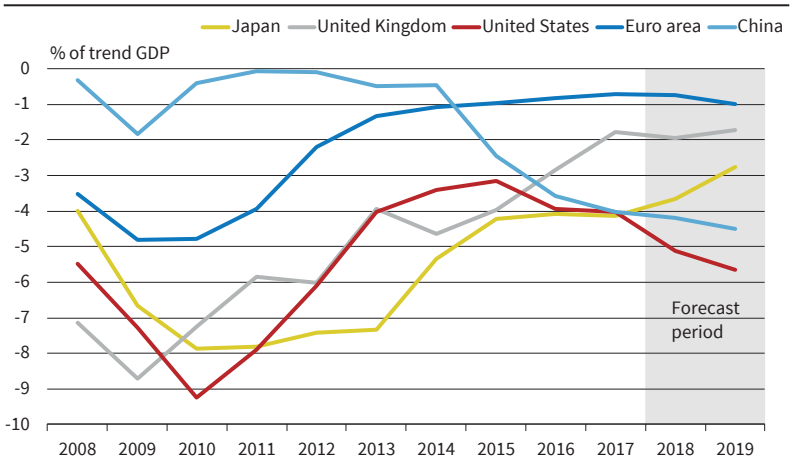
1.3 FISCAL AND MONETARY POLICY

1.3.1 Fiscal Policy

Fiscal policy was expansionary in the United States and China during the forecast period (see Box 1.1). The United States in particular provided a strong impulse with its tax reform at the beginning of last year. However, fiscal policy in China also became more expansionary as further measures were taken in the form of higher tax allowances and further tax deduction options in order to support those companies that were affected by the trade war in particular. As a result, the structural fiscal deficits in the world's two largest economies will continue to deteriorate (see Figure 1.16).

In Japan, on the other hand, fiscal consolidation has gradually resumed. The deficit was reduced by over half a percentage point of GDP last year. Even although the Bank of Japan owned about half of the outstanding government bonds by the end of 2018, a public debt level of approximately 240 percent of GDP poses a serious risk. An expansive monetary policy is keeping money market rates and returns on long-term government bonds at zero, which is buying time. The next major step in the fiscal consolidation is the 2 percentage-point increase in the consumption tax scheduled for October this year. Together with other measures, a reduction of the deficit by about one percentage point of GDP is likely to be achieved this year. For the first time in over a

Figure 1.16
Government Structural Budget Balances



Source: IMF World Economic Outlook, November 2018; last accessed on 3 February 2019.

Box 1.1
The Impact of a Reduction in the Corporate Tax Burden in Non-Euro Area Countries

The year 2018 saw a worldwide trend towards tax relief for companies. In large economies outside the euro area in particular, corporate tax cuts were either implemented or at least planned. The most prominent example is the United States, where the Tax Cuts and Jobs Act, adopted in December 2017, not only lowers the federal profit tax rate, but also makes it possible to write off equipment investments immediately. The People's Republic of China will follow a similar path. Chinese authorities have announced significant corporate tax cuts for 2019 in response to the trade dispute with the United States and the economic slowdown. In addition, the United Kingdom is likely to seize the opportunity to reinvent itself economically after Brexit. It is expected that changes in the tax law will be introduced to give companies in the United Kingdom a locational advantage.

The effects of such corporate tax reductions can be simulated using the ifo-DSGE model. A stylized scenario was used for the simulation, in which China, the United States and the United Kingdom permanently reduce their corporate tax burden by one third. These three countries have a weight of 64 percent in the country block describing the world outside the euro area. The magnitude of the simulated reform roughly corresponds to the Tax Cuts and Jobs Act, whose enactment reduced the effective average corporate tax rate from 37 percent to 23 percent (see Spengel et al., 2018). The model describes the impact on countries outside the euro area and spill-over effects on the euro area.

During the simulation, the usual assumptions of active monetary policy and passive fiscal policy are made. Thus, the central bank controls inflation and the government stabilises the national debt. The budget gap opened by the corporate tax cut will be closed by a combination of new debt and transfer cuts. In view of the fact that the players in this model behave according to Ricardian equivalence, the division between new indebtedness and transfer cuts is irrelevant.

The simulated decline in taxation in China, the United States and the United Kingdom offers companies located in these countries the opportunity to charge their customers lower prices and thus gain international competitiveness. Therefore, realised inflation in countries outside the euro area in the first quarters after the tax reform is below the trend inflation rate. Lower prices immediately lead to an expansion of exports to the euro area; countries outside the euro area expand their exports by 1 percent compared with the baseline scenario. Price restraint is boosting domestic demand in China, the United States and the United Kingdom. To satisfy the higher demand, it is therefore necessary to increase production in those countries. The corporate tax reform will give them an increase in economic output of up to 3 percent compared to the baseline scenario without tax changes. Due to increased production, companies are demanding more labour and capital. Thanks to the good situation in the labour market, trade unions are able to negotiate better collective wage agreements. The strong demand for capital is stimulating investment activity, which is over 7 percent higher than the baseline scenario and is reflected in an increase in imports from the euro area.

The simulated corporate tax cuts trigger negative spill-over effects on investments in the euro area, which are up to 4 percent lower than in the baseline scenario. Instead of investing in the euro area, investments are being made in the rest of the world. As a result, resources are shifting to more attractive investment locations.

decade, this should lead to a slight reduction in the debt-to-GDP ratio.

In both the euro area and the United Kingdom, fiscal policy did not provide any expansionary impetus last year. On average across all EU countries, the cyclically-adjusted primary fiscal balance remained at 0.8 percent of trend GDP (see Table 1.2). After a consolidation phase in the years 2011 to 2013, the cyclically adjusted primary deficit has hardly changed in the European Union. Nevertheless, fiscal deficits have been reduced overall. This reduction can therefore largely be attributed to the economic upswing and lower interest payments resulting from refinancing maturing government bonds in the prevailing low interest rate environment. For the European Union, the latter have accounted for about one third of the reduction in budget deficits since 2013.

This year, the fiscal policy stance in the euro area will become slightly looser. For most countries, structural deficits are likely to remain largely unchanged. However, fiscal policy will become substantially more expansionary in highly indebted Italy. Against a background of the expected normalisation of monetary policy and the associated increase in capital market interest rates, Italy could therefore come under renewed pressure from the financial markets. Nevertheless, the populist Italian government is targeting a significant increase in the budget deficit in 2019, which triggered a budget dispute with the EU Commission back in autumn 2018. The plans of the previous government, which were presented to the EU Commission in May 2018, aimed for a budget deficit of 0.8 percent. According to the compromise agreement, this figure should now rise to 2.04 percent. In

Table 1.2

Public Finances

	Gross debt[a]			Fiscal balance[a]			Primary fiscal balance[a]			Cyclically– adjusted primary fiscal balance[a]		
	2009–2012	2013–2017	2018	2009–2012	2013–2017	2018	2009–2012	2013–2017	2018	2009–2012	2013–2017	2018
Germany	78.0	70.9	60.1	– 2.1	0.6	1.6	0.4	2.1	2.5	1.1	2.2	2.2
France	86.7	96.1	98.7	– 6.0	– 3.6	– 2.6	– 3.5	– 1.5	– 0.8	– 2.9	– 1.0	– 0.8
Italy	117.0	131.0	131.1	– 4.0	– 2.7	– 1.9	0.6	1.6	1.7	1.0	2.6	1.7
Spain	67.0	98.4	96.9	– 10.1	– 5.2	– 2.7	– 7.9	– 2.1	– 0.3	– 7.6	– 0.4	– 0.7
Netherlands	61.0	63.8	53.2	– 4.7	– 1.2	1.1	– 2.8	0.1	1.9	– 2.5	1.3	1.5
Belgium	101.5	105.8	101.4	– 4.5	– 2.4	– 1.0	– 0.8	0.6	1.4	– 0.6	1.0	1.4
Austria	81.7	82.3	74.5	– 3.6	– 1.6	– 0.3	– 0.7	0.6	1.3	– 0.4	1.4	1.0
Finland	47.8	60.9	59.8	– 2.1	– 2.2	– 0.8	– 0.7	– 1.1	0.1	– 0.2	0.4	0.0
Greece	151.2	177.4	182.5	– 11.4	– 4.2	0.6	– 5.6	– 0.7	3.9	– 5.8	1.9	4.5
Portugal	104.4	128.5	121.5	– 8.5	– 4.3	– 0.7	– 4.7	0.2	2.7	– 4.7	1.5	2.3
Ireland	94.6	88.5	63.9	– 16.7	– 2.5	– 0.1	– 13.6	0.5	1.5	– 9.8	1.3	– 2.0
Slovakia	43.3	52.6	48.8	– 6.0	– 2.2	– 0.6	– 4.5	– 0.5	0.7	– 4.6	0.2	0.9
Slovenia	43.4	77.2	70.2	– 5.5	– 5.0	0.5	– 3.8	– 2.1	2.4	– 3.3	– 0.3	1.7
Luxembourg	19.1	22.5	21.4	– 0.1	1.3	1.3	0.3	1.7	1.7	1.5	1.9	1.5
Lithuania	35.3	40.2	34.8	– 7.0	– 0.5	0.6	– 5.3	0.9	1.5	– 3.2	1.3	1.1
Latvia	41.6	39.4	37.1	– 5.8	– 0.9	– 0.8	– 4.2	0.3	– 0.1	– 1.7	1.2	– 0.6
Cyprus	64.3	104.1	105.0	– 5.3	– 2.7	2.8	– 3.0	0.4	5.5	– 4.5	3.1	5.5
Estonia	7.3	9.7	8.0	– 0.3	0.0	0.5	– 0.1	0.1	0.6	2.8	0.7	– 0.2
Malta	68.2	59.6	47.9	– 2.9	– 0.1	1.3	0.2	2.2	2.9	2.0	2.4	1.5
Euro area	**85.7**	**92.0**	**86.9**	**– 5.1**	**– 2.0**	**– 0.6**	**– 2.2**	**0.3**	**1.2**	**– 1.7**	**1.1**	**0.9**
United Kingdom	76.0	87.1	86.0	– 8.7	– 3.9	– 1.3	– 6.1	– 1.4	1.1	– 4.5	– 1.4	0.7
Sweden	39.0	42.7	37.8	– 0.5	0.0	1.1	0.6	0.5	1.3	1.7	0.9	0.8
Denmark	43.4	40.4	33.3	– 2.8	– 0.2	0.2	– 0.9	1.3	1.2	0.4	1.7	1.0
Poland	52.6	52.4	49.2	– 5.8	– 2.8	– 0.9	– 3.3	– 0.9	0.6	– 3.9	– 0.2	0.2
Czech Republic	38.8	39.7	33.2	– 4.1	– 0.3	1.4	– 2.8	0.7	2.1	– 2.6	1.7	1.8
Romania	30.8	37.4	35.1	– 6.3	– 2.0	– 3.3	– 4.7	– 0.4	– 1.9	– 4.1	0.3	– 2.4
Hungary	79.2	75.9	72.9	– 4.2	– 2.2	– 2.4	0.1	1.4	0.1	1.8	2.4	– 0.5
Croatia	59.7	81.1	73.5	– 6.3	– 2.8	0.2	– 3.7	0.4	2.7	– 3.1	2.0	2.5
Bulgaria	15.2	25.1	23.3	– 2.4	– 1.2	0.8	– 1.6	– 0.4	1.5	– 2.0	0.4	1.6
European Union	**79.9**	**85.9**	**81.4**	**– 5.5**	**– 2.2**	**– 0.7**	**– 2.7**	**0.1**	**1.2**	**– 2.0**	**0.7**	**0.8**
United States	96.4	105.3	106.1	– 10.1	– 3.7	– 4.7	– 8.5	– 2.2	– 2.9			
China	34.0	41.8	50.1	– 0.6	– 2.4	– 4.1	– 0.2	– 1.8	– 3.1			
Japan	215.0	234.6	238.2	– 9.4	– 5.1	– 3.7	– 8.4	– 4.4	– 3.3			
Switzerland	43.3	42.5	40.2	0.5	0.2	0.6	0.9	0.4	0.8			

[a] As a percentage of gross domestic product. For the European countries, definitions according to the Maastricht Treaty. For the United States, China, Japan and Switzerland, definitions are according to the IMF.

Source: European Commission, Autumn 2018; IMF World Economic Outlook, October 2018.

fact, the deficit may well turn out to be significantly higher, as the agreement makes rather optimistic assumptions about GDP growth in 2019; Albeit to a lesser extent, French and German fiscal policy is also likely to be expansionary this year. Whereas in France in particular the revenue side is to be stimulated by the gradual introduction of tax reliefs, the reduction in the contribution to unemployment insurance will have an expansionary effect in Germany.

1.3.2 Monetary Conditions and Financial Markets

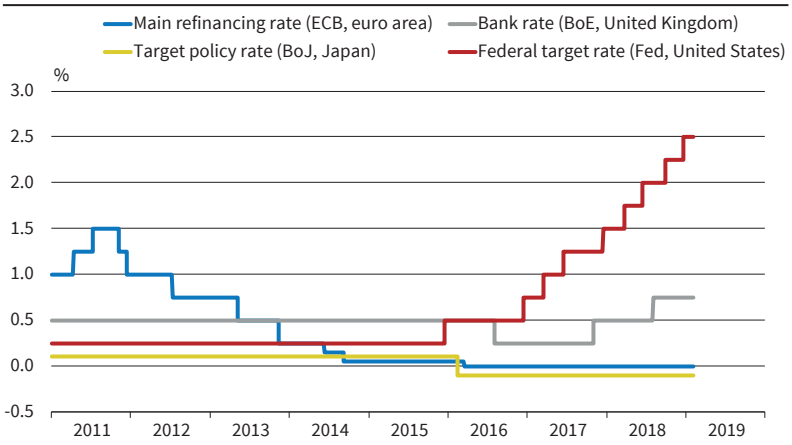
Monetary Conditions

Monetary policy remains expansionary worldwide. However, the differences in the degree of expansion, especially between the United States and the rest of the world, are becoming ever greater. The US Federal Reserve is continuing to reduce its expansionary measures in view of the fiscal impulses and the inflation trend; the Federal Funds Target Rate is at 2.5 percent (see Figure 1.17). On the other hand, the central banks in the euro area and in Japan kept interest rates at zero or slightly negative levels. The Bank of England raised its key interest rate last summer, but it is still at a low level of 0.75 percent. By contrast, the policy of China's central bank became more expansionary. Despite its pledges to pursue a neutral monetary policy, it has lowered minimum reserve rates for commercial banks to support smaller private companies experiencing financing difficulties.

While the European Central Bank (ECB) stopped its monthly net purchases of bonds by the end of last year,

Figure 1.17

Central Bank Interest Rates



Source: European Central Bank; Federal Reserve Bank of St. Louis; Bank of England; Bank of Japan; last accessed on 3 February 2019.

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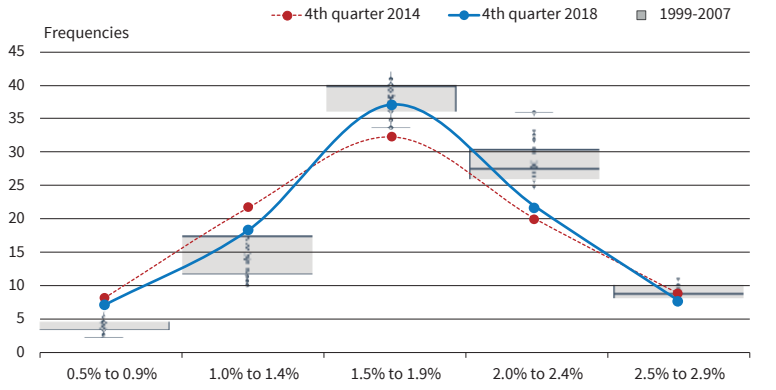
the Bank of Japan continues to control the yield curve through bond purchases. In July 2018, the Bank of Japan modified its yield curve control policy to allow wider deviations from the benchmark 10-year yield around an unchanged target of around zero percent. The Bank of Japan also introduced forward guidance on maintaining ultra-low policy rates for an extended period of time.

During the forecast period, the ECB should gradually tighten its monetary policy somewhat. Thanks to the persistently low core inflation rate, the ECB sees no reason to quickly raise interest rates in the near future. However, a normalisation of the monetary policy provides the ECB with greater room for manoeuvre in the event of a renewed crisis. Since March 2016 it has left the main refinancing rate unchanged at 0.0 percent, the marginal lending facility at 0.25 percent and the deposit rate at – 0.4 percent. While the ECB is expected to raise the deposit rate by 15 basis points in the second half of 2019 to restore the symmetry of the interest band, an increase of 25 basis points is expected for the main refinancing rate at the turn of the year.

The ECB made its last net purchases under the expanded Asset Purchase Program (APP) in December 2018. By the end of last year, the ECB was holding securities under the APP worth about 2,570 billion euros. The reinvestment of funds from maturing securities will continue for an indefinite period. This will keep the balance sheet size of the ECB at more or less its current level (see Figure 1.18). The US Fed, on the other hand, will allow 50 billion US dollars to run off its balance sheet each month.

Figure 1.19

Distribution[a] of Medium-Term Inflation Expectations in the Euro Area



[a] For the ranges of values indicated on the horizontal axis, the box plots represent the distribution of the frequencies of the five-year inflation expectations of the Survey of Professional Forecasters in the period from 1999 to 2007. The cross indicates the mean value, the horizontal line in the box the median, the upper and lower edges of the box the quartiles.
Source: ECB; EEAG calculations.

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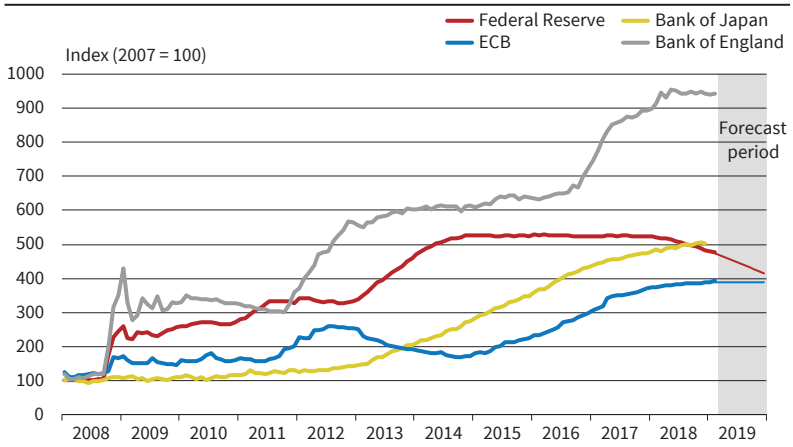
One justification for the APP at the end of 2014 was the threat of inflation expectations in the medium term becoming less anchored to the ECB's target value of below but close to 2 percent. This would have massively undermined the credibility of the central bank and fundamentally questioned its policy. In fact, average medium-term expectations for euro area inflation, as measured by the Survey of Professional Forecasters, fell slightly to 1.8 percent in 2014, after fluctuating between 1.9 percent and 2.0 percent in previous years. More importantly, the distribution of inflation expectations as measured by the Survey of Professional Forecasters had shifted compared to the pre-crisis period, meaning that an ever-rising proportion of respondents considered inflation rates of between 1.0 percent and 1.4 percent, i.e. well below 2.0 percent, in the medium term – and thus a de-anchoring – to be probable (see Figure 1.19, red line). Over the last two years, however, the distribution of inflation expectations, especially for the range between 1.0 percent and 1.4 percent, has shifted once again significantly in the direction of the pre-crisis distribution (see Figure 1.19, blue line). Although expectations ranging between 1.5 percent and 1.9 percent are still cited less frequently than the 1999–2007 average, the current distribution is much more symmetrical, as an overshooting of the inflation target is considered less likely than in the pre-crisis period. In addition, the mean value of five-year inflation expectations returned to 1.9 percent as of the end of 2017. From these figures it can be concluded that the experts surveyed consider the ECB's

Figure 1.18

Balance Sheets Sizes of Major Central Banks



Source: Federal Reserve; Bank of Japan; European Central Bank; Bank of England; last accessed on 3 February 2019; EEAG calculations and forecast.

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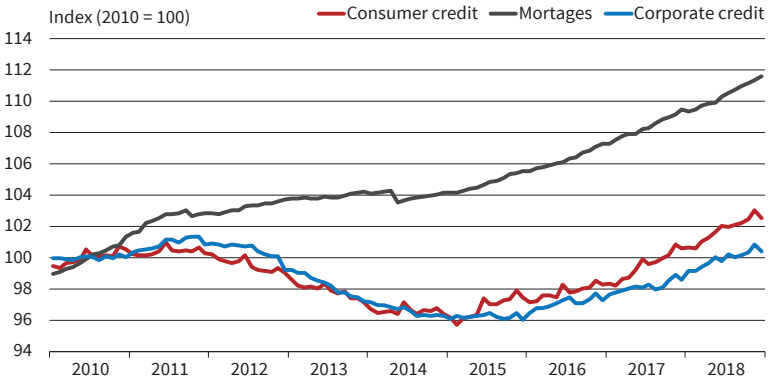
inflation target of just under 2 percent to be achievable in the medium term, and that the probability of deflation has significantly decreased.

Although the monthly APP purchase volume did substantially decline from 60 billion euros at the end of 2017 to 30 billion by the end of September 2018 and was just 15 billion euros during the last months of 2018, the pace at which credit growth has accelerated since 2015 has hardly changed. It is still considered slow given the historically low interest rates and enormous liquidity injected by the ECB into the system. Average interest rates for new corporate and real estate loans remained stable. Overall, financing conditions in the euro area remain very favourable. In the SAFE (Survey on the Access to Finance of Enterprises) survey conducted in autumn 2018, small and medium-sized enterprises stated that their access to debt financing had further improved. This assessment is consistent with the latest Bank Lending Survey. Accordingly, the lending standards for corporate loans were relaxed again in the third quarter, after a slight deterioration in the previous quarter; those for real estate loans remained largely unchanged in the third quarter of 2018. Mortgage lending has been growing steadily for years, rising by 1.9 percent in 2018. Growth in consumer credit has been positive since 2015 and hit 2.3 percent in 2018. Since 2016, loans to the corporate sector have also been increasing, reaching a rate of 1.8 percent last year (see Figure 1.20). By comparison, while M1 increased by almost 7 percent, M3 grew by around 3.7 percent last year.

Figure 1.20

Credit Developments in the Euro Area[a]



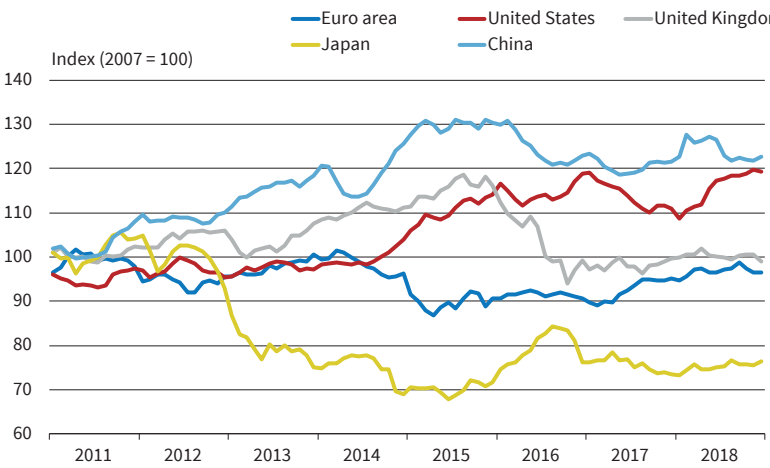
[a] These indexes of adjusted outstanding amounts are calculated according to $I_t = I_{t-1}(1+F_t/L_{t-1})$, where L stands for the outstanding nominal amount of credit and F the amount of transactions (credit granted). The transactions F are calculated from differences in outstanding amounts adjusted for reclassifications, other revaluations, exchange rate variations and other changes which do not arise from transactions (see European Central Bank, 2010, for details). A specific securitisation operation in France has led to a downward level shift in mortgages in May 2014.
Source: European Central Bank; last accessed on 3 February 2019. © CESifo

The increasing differences in monetary policy stance has led to a divergence between long-term interest rates in the United States and the rest of the world accompanied by a significant effective appreciation of the US dollar (see Figure 1.21). As a result, the euro depreciated vis-à-vis the US dollar again in 2018. From a purchasing power parity perspective, the euro has now been undervalued for four years in a row (see Figure 1.22). Nevertheless, the real effective external value of the euro, but also that of the British pound and Japanese yen, remained almost unchanged last year as a number of emerging market currencies depreciated. The normalisation of monetary policy in the United States made emerging markets less attractive for investments, leading to a decline in capital inflows to emerging markets. Over the summer months, Turkey and Argentina in particular became the focus of financial markets due to their high current account deficits and high foreign debt levels, resulting in a sharp depreciation in their currencies. In the meantime, the Turkish lira has recovered somewhat and the devaluation of the Argentine peso has halted for the time being, probably partly because the central banks of these countries intervened with strong interest rate hikes and sales of foreign exchange reserves. In the case of Argentina, the exceptional Stand-By Arrangement of the IMF was also helpful.

Whereas in the United States long-term government bond yields tended to rise particularly at the beginning of 2018, the opposite was the case for China. Triggered by the stronger than expected weakening of its economy, Chinese government

Figure 1.21

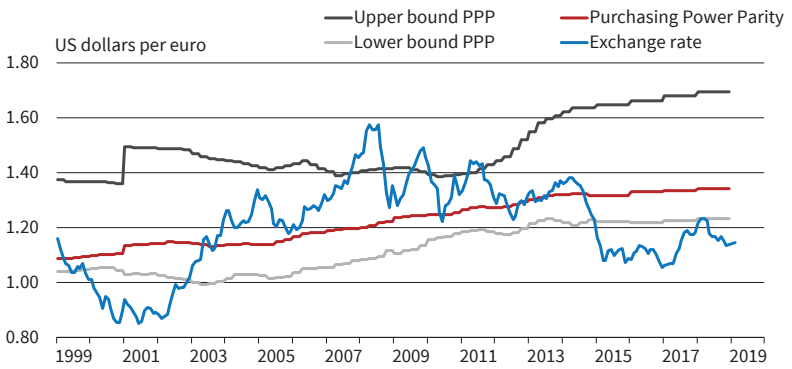
Real Effective Exchange Rates around the World



Source: Bank for International Settlements; last accessed on 3 February 2019. © CESifo

Figure 1.22

Exchange Rate of the Euro against the US Dollar and PPP [a]



[a] The nominal exchange rate is based on monthly data, while the exchange rate based on purchasing power parity (PPP) is given at a quarterly frequency. The US dollar-euro PPP rate is calculated as the GDP-weighted average of the euro country-specific PPP estimates vis-à-vis the US dollar. The PPP upper bound represents the 90th percentile of the euro country-specific PPP estimates vis-à-vis the US dollar; the lower bound the 10th percentile. In calculating these bounds the 11 euro area member countries with the largest GDP weights are used.

Source: OECD, OECD Economic Outlook, Vol. 2018 issue 2, November; European Central Bank; last accessed on 3 February 2019.

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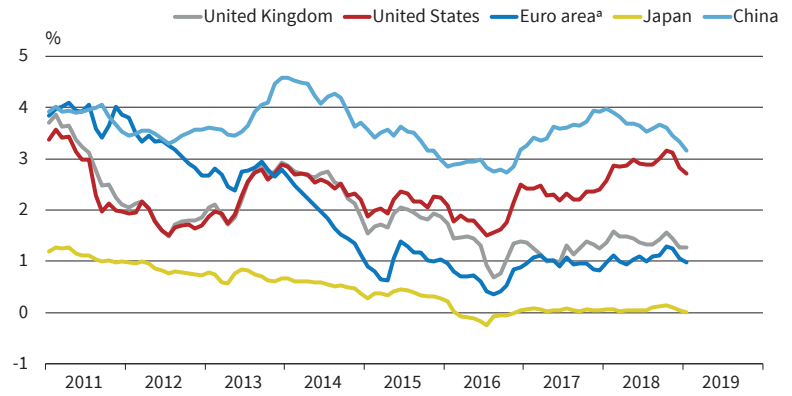
Figure 1.23

10-Year Government Bond Yields



[a] The synthetic euro area benchmark bond refers to the weighted average yield of the benchmark bond series from each Economic and Monetary Union member.

Source: Datastream; last accessed on 3 February 2019.

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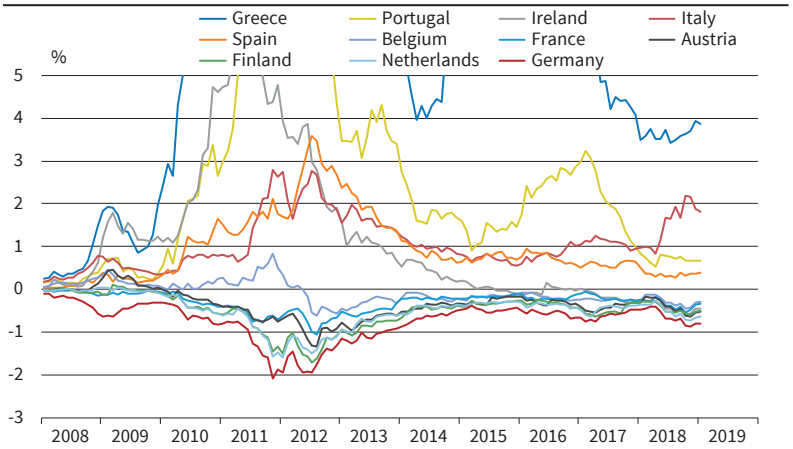
Figure 1.24

Regional Disparties in Government Bond Yields in the Euro Area

Differences between 10-year national and synthetic euro area benchmark bond yields



Source: Datastream; last accessed on 3 February 2019.

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bond yields continued to decrease throughout the year, losing a total of almost 100 basis points. In Japan, the United Kingdom and the euro area, long-term government bond yields largely moved laterally during 2018 (see Figure 1.23).

With the exception of Italy, government bond yields within the euro area hardly changed during 2018 either (see Figure 1.24). The election of a new Italian government that is aiming for a significant increase in its budget deficit led to a strong increase in risk premiums on Italian government bonds in May last year (see Box 1.2). The decline in risk premiums on Greek, Portuguese and Spanish government bonds ground to a halt last year. The economic situation in these former crisis countries has clearly improved in recent years. However, the increased risk of contagion triggered by the Italian government is immediately noticeable. Unlike the yields of Greece, Portugal and Spain, nearly all other euro area country yields have slightly moved away from the synthetic euro area average.

Monetary policy has only become significantly less accommodative in the United States, which could possibly have led to corrections in its equity markets. The loss of the Dow Jones Industrial Average in 2018 of 5.6 percent was relatively small compared to market declines in all other major regions, and particularly those in the euro area and China. Whereas these other markets hardly saw any uplift during the year, those of the United States experienced a bit of a roller coaster ride last year. After increasing by 5.6 percent between January and April, the Dow Jones increased by almost 8 percent until September, only to drop by over 9 percent by the end of the year. From a euro area perspective, the appreciating dollar cushioned the fall and boosted the rise somewhat (see Figure 1.25). Measured in euros, the overall decline of the Dow Jones Industrial Average turned out to be only 0.6 percent

Box 1.2

On the Risk of the Euro Crisis Flaring up Again

The budget plans of the populist Italian government formed in May 2018 and the associated dispute with the EU Commission have led to a significant increase in risk premiums for Italian debt instruments. While the yield gap to German government bonds with a residual maturity of ten years was relatively stable at an average of 1.3 percentage points between January and April 2018, it rose sharply on 18 May 2018, when the coalition agreement of the current Italian government was signed, and reached its temporary high of 3.3 percentage points on 20 November 2018. Since then, risk premiums have fallen again, as the Italian government has signalled its willingness to make changes to the draft budget. The premiums of credit default swaps (CDS), which are traded over-the-counter and serve as a measure of the probability of default of a specific debtor within a specified period, show a very similar trend. For the five-year protection against insolvency of the Italian federal state, they rose from an average of 52 basis points in the first four months of 2018 to 136 basis points on 20 November 2018.

The main creditors of the Italian state are Italian commercial banks. By mid-2018 they held about 18% (353 billion euro) of the outstanding government bonds. As the rise in yields forced creditors to book losses on the Italian state's securities, which reduced the banks' equity and thus increased their probability of default, risk premiums for loans to Italian banks increased at the same time as risk premiums for the Italian state rose. Since the beginning of the year, the average premium required by investors to insure loans to Italian banks for a term of five years has quadrupled. However, foreign commercial banks also hold a significant proportion of Italy's public debt. In mid-2018, the claims of French and Spanish commercial banks on the Italian state amounted to 55 billion euro and 41 billion euro respectively. Since May 2018, their risk premiums have almost doubled as a result of the price losses of Italian government bonds.

An escalation of the budget dispute thus not only endangers the stability of the Italian banking system, which is already weakened by its above-average share of loans at risk of default at the total loan volume. It may also be transferred to the banking systems of other countries, which hold claims against the Italian state or against Italian banks. If banks get into financial difficulties, there is a danger that the risks associated with a bank rescue are transferred to the state in which the banks are located. During the global financial crisis and the euro crisis, it was precisely this vicious circle that led to a worsening of the European sovereign debt crisis. The banking union, which effectively started with the ECB's takeover of the Single Supervisory Mechanism (SSM) in November 2014, was supposed to sever the risk association between states and commercial banks. In particular, the losses arising from the liquidation of a distressed bank should, in future, be borne primarily by the shareholders and creditors of a bank and no longer by the state, and thus by taxpayers. From the significantly lower correlation between the CDS premiums of banks and government within countries immediately after the SSM came into force, it can also be concluded that this project initially appeared credible.

However, the increasing synchronisation indicates that this credibility has been gambled away. The liquidation of the two Italian banks Veneto Banca and Banca Popolare di Vicenza in June 2017, for whose liquidation the Italian state provided aid in the form of guarantees (12 billion euro) and capital injections (5 billion euro) (European Commission, 2017), probably contributed significantly to this development. Although these measures did not conflict with the rules of the Banking Union – the European Banking Supervision delegated responsibility for settlement to national Italian supervisory institutions due to the non-systemically relevant size of the two banks – the measures still contradicted the spirit of the rules. The case shows once again that the rules drawn up by the European Union to achieve a more stable monetary union offer sufficient loopholes.

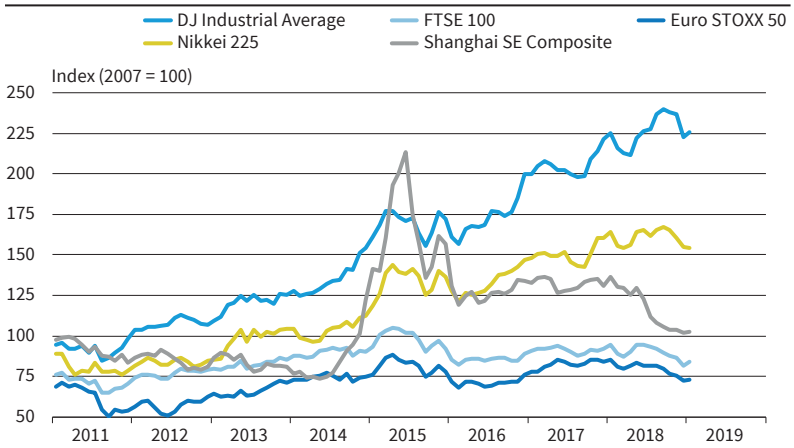
during 2018. The disappointing economic data for the euro area in particular and China, but also the United Kingdom, led to overall stock market losses of the Euro STOXX 50, Shanghai SE Composite and FTSE 100 of respectively 14.3 percent, 24.6 percent and 12.5 percent during the year. The decline in Japan set in somewhat later, but nevertheless resulted in an overall loss of 12.1 percent for the Nikkei 225.[1]

Many of the stock market indices within the euro area are still well below the levels reached before the start of the financial crisis. By the end of 2015, the Athex (Greece) had almost returned to its low reached in June 2012, roughly 90 percent below the average value seen in 2007 and about 30 percent below its value at the end of 2014 (see Figure 1.26). Whereas the Greek Athex saw the strongest decline last year of 23.6 percent, all others also registered double-digit losses, ranging between 11 percent for the CAC 40 (France) to 22.1 percent for the ISEQ (Ireland).

[1] In euros, these declines were, respectively 14.3 percent, 25.0 percent, 13.6 percent and 4.2 percent, respectively.

Figure 1.25

Developments in International Stock Markets from a Euro Area Perspective[a]



[a]Stock market indices outside the euro area are first converted into euros.
Source: Datastream; last accessed on 3 February 2019.

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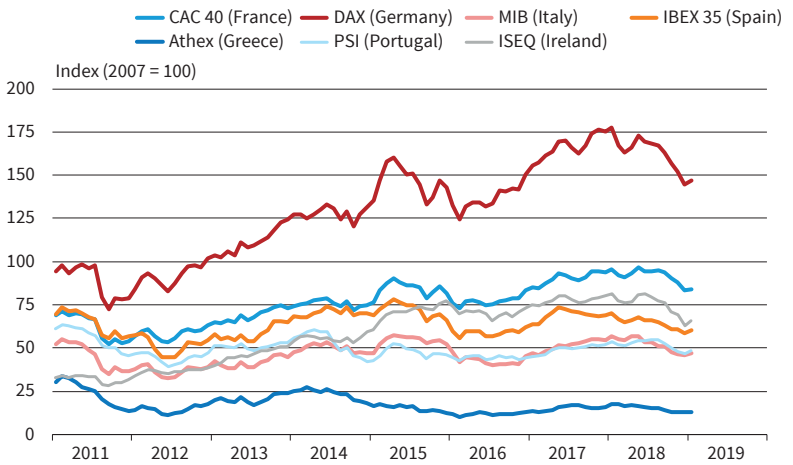
Figure 1.26

Developments of Selected Stock Markets within the Euro Area



Source: Datastream; last accessed on 3 February 2019.

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1.4 MACROECONOMIC OUTLOOK[2]

1.4.1 Assumptions, Risks and Uncertainties

At the beginning of December, the United States and China agreed to temporarily suspend further tariff increases for three months. Negotiations are now ongoing to reach a comprehensive agreement on intellectual property, non-tariff measures and cyber theft, among other things by early March. This forecast is based on the assumption that the status quo in the US trade disputes with China and the European Union will not change. Furthermore, the present forecast is based on the assumption that the settled budget dispute between Italy and the European Union will not revive and lead to further economic distortions. In addition, the forecast assumes that there will be no "hard Brexit". If inflation in the United States were to rise more sharply than currently expected in view of increasing labour market tensions, the US Federal Reserve would raise interest rates faster than currently expected. This forecast assumes that the resulting turbulence in the emerging markets will remain locally limited.

The forecast is based on the assumption that the price of a barrel of Brent crude oil will be on average 56 US dollar in 2019. It is also assumed that the euro will cost on average 1.14 US dollar this year.

The global economy is currently exposed to considerable economic risks. The United States has imposed tariffs on a large number of imports, followed by countermeasures from China and the European Union. The present forecast assumes that the measures will not be extended. However, there is a risk that the trade conflict will intensify and further trade barriers will be introduced. In the event of an escalation, the global exchange of goods and overall economic production are likely to suffer a considerable setback.

As a result of the trade dispute, higher import prices could also lead to a faster rise in inflation rates. Central banks may be forced to adopt a more restrictive stance at a time when macroeconomic activity is weakening. Should the central banks in the advanced economies have to take more restrictive measures than currently expected, capital outflows from the emerging markets could again occur with a corresponding devaluation of their exchange rates. Since many of these countries hold a portion of their debt in US dollars, interest payments and thus the indebtedness of the public and private sectors would rise significantly, weakening overall economic activity (see Joint Economic Forecast, 2018, and Council of Economic Experts, 2018). Some of these countries are already heavily indebted, making defaults and financial market turbulence more likely. The recent events in Argentina and Turkey are a warning example.

The risks to the economic outlook in Europe continue to outstrip the opportunities. These risks include a 'hard Brexit', the still subliminal budget dispute between Italy and the European Commission, and risks related to the global trade dispute and the afo-

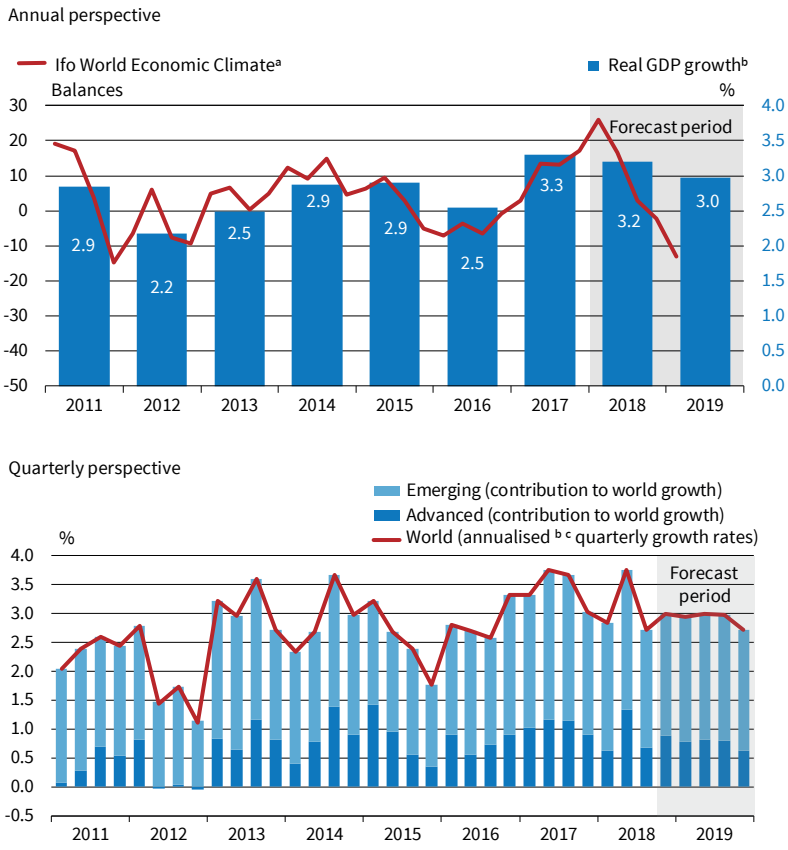
[2] The forecasts presented are updates of ifo (2018) and Abberger et al. (2018).

rementioned vulnerability of the emerging markets. Nevertheless, there is a possibility that future economic developments are better than projected in this forecast. One reason for this could be, for example, the economically stimulating effect of the recent sharp drop in oil prices.

Initially, the vote on the Brexit agreement scheduled for 11 December in the House of Commons seemed to secure the United Kingdom's retention in the EU Customs Union until 2020. With the clear rejection of the prime minister's Brexit deal in mid-January, the likelihood of a 'hard Brexit' and possible distortions in trade between the United Kingdom and the European Union have increased significantly again, leading to a substantial further increase in uncertainty. The present forecast assumes that the United Kingdom will leave the European Union on 29 March 2019 in an orderly fashion and that there will be no restrictions on the cross-border movement of goods. If, on the other hand, the United Kingdom were to leave the European Union in a disorderly manner, the reintroduction of border controls and customs duties would have serious consequences for the British economy, and thus also for the rest of the European Union. International production and supply chains would be affected, leading to short-term distortions and a slump in industrial production in Europe that would be difficult to quantify.

Another risk is reflected in the high risk premiums on Italian government bonds that investors have been demanding since the new Italian government took office in May. This has made the Italian financial sector, which had become more resilient until recently, more vulnerable again. If the budget dispute between Italy and the European Commission were to flame up again and the risk premiums do not recede, the solvency of the highly indebted Italian government could be called into question. Since Italian government bonds are held not only by Italian banks, but also by banks outside Italy, and Italian banks are interlinked with other European financial institutions, a further fall in the price of Italian securities could also affect financial institutions in other euro area member states (see Box 1.2).

Figure 1.27
World Economic Growth and the ifo World Economic Climate



[a] Arithmetic mean of judgements of the present and expected economic situation.
[b] Countries are weighted according to previous year's nominal GDP in US dollars and market exchange rates.
c Growth contributions of advanced and emerging economies thereof.

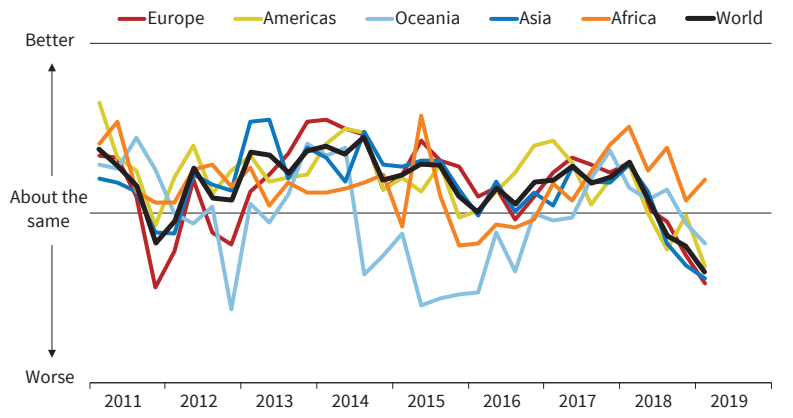
Source: National statistical offices; Ifo World Economic Survey I/2019; EEAG calculations; GDP 2018 and 2019 EEAG forecast.

1.4.2 Global Economy

This winter, the global economy is likely to have lost further momentum, which is indicated by the majority of global sentiment indicators. Due to pessimistic expectations, the ifo World Economic Climate deteriorated for the fourth time in a row in the first quarter of 2019 (see Figure 1.27). With the exception of Africa, the economic expectations of experts have deteriorated across all continents (see Figure 1.28). In particular, the outlook in Europe, Asia and the Americas has turned more pessimistic.

The recovery and upswing in recent years has already lasted for a decade. Given the duration of previous cycles, it may simply be time for a recession. When measuring the business cycle from trough to trough, the current upturn in the world's advanced economies started in 2009 and is already lasting much longer than the previous three (see upper panel of Figure 1.29), which only lasted four to seven years. However, the previous downturn, i.e. the Great Financial Crisis, was exceptionally strong, causing an unusually large negative output gap. In addition, the Euro Area Sovereign Debt Crisis that followed soon after the

Figure 1.28
ifo World Economic Survey
Economic expectations for the next 6 months

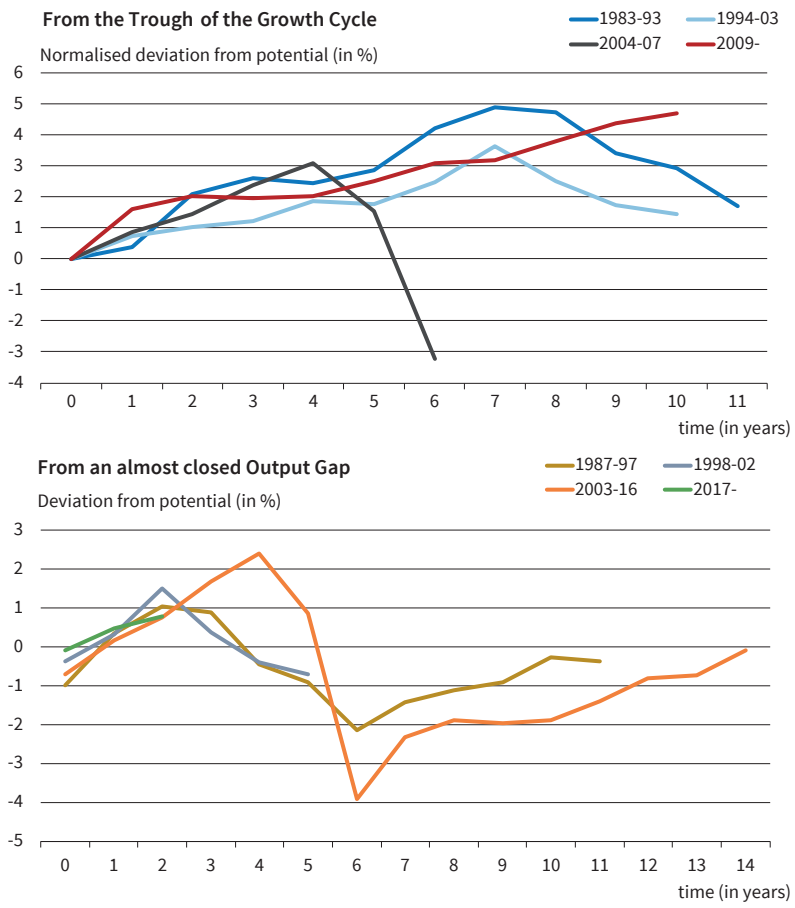


Source: ifo World Economic Survey I/2019. © CESifo

Great Financial Crisis made the output gap in Europe even more negative. When measuring a cycle starting from the situation in which output is more or less at potential, it is less obvious that the next recession has been long due (see lower panel of Figure 1.29). Output did not return to more or less potential until 2017 and, measured as such, we have just entered the second year of this cycle. Nevertheless, this comparison does suggest that a slowdown at this stage would not be exceptional.

In the further course of the year, world output is expected to increase at lower rates than in previous quarters. While growth is initially expected to be slightly above potential, it will gradually fall below this level. The slowdown in the global economic upswing can be partly explained by the fact that, in a number of advanced economies, production capacities are over-utilised and there is a shortage of suitable labour. Despite expansionary monetary policy overall, political and economic uncertainty are still curbing investment. Furthermore, the gradually more restrictive monetary policy in the United States is likely to lead to a significant deterioration in financing conditions, particularly in Latin America, thus slowing economic expansion. In addition, positive impulses from the US tax reform will slowly fade out, meaning that investment and consumer spending in the United States will probably increase less dynamically than before. This should also dampen US demand for foreign goods and services. The economy in the euro area is likely to lose considerable momentum due to weakening activity in the manufacturing sector and, as a result, weaker investment and export dynamics. The Chinese economy is expected to expand at declining but, from a European perspective, still strong rates this year. Monetary impulses from lower banking reserve requirements and fiscal impulses from, e.g., tax reductions are offset by the dampening effects of tighter financial regulations, and by a general burden on economic activity stemming from the very high indebtedness of the corporate sector. The trade restrictions that have already been introduced are unlikely to have much of a dampening

Figure 1.29
Comparing Growth Cycles in Advanced Economies



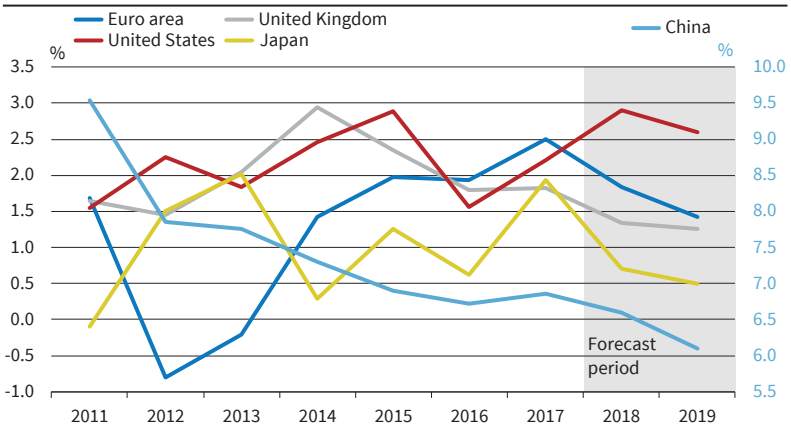
Source: IMF World Economic Outlook, November 2018; last accessed on 3 February 2019; EEAG calculations. © CESifo

effect on the global economy themselves, as their scope has been limited to date. However, uncertainty over the introduction of further tariffs is likely to weigh on global economic activity. In addition, and despite anticipatory demand effects, the UK economy continues to be weighed down by uncertainty over exit arrangements from the European Union. Overall, world GDP is expected to grow by 3.0 percent in 2019.

Figure 1.31

Economic Growth by Region

Real GDP percentage change from previous year



Source: US Bureau of Economic Analysis; Eurostat; ESRI; National Bureau of Statistics of China; last accessed on 3 February 2019; EEAG forecast.

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Whereas the drop in crude oil prices in recent months will reduce price pressure, higher wage inflation caused by highly utilised capacities, will do the opposite. For the advanced countries, this will result in a headline inflation rate similar to that of last year. In the emerging markets inflation, on the other hand, is likely to continue to rise this year. The depreciation of emerging market currencies in recent months will also put upward pressure on (imported) prices. As regards China, the decision by central bank to lower the minimum reserve requirements for commercial banks and continued expansionary fiscal policy are likely to put upward pressure on prices while continued economic softening will have the opposite effect.

World trade will slow down further his year. This is indicated by the steady decline in world trade expectations in the ifo World Economic Survey and the subdued RWI/ISL Container Throughput Index. Overall, international trade increased by 3.5 percent last year in real terms and will do so by 3.0 percent this year.

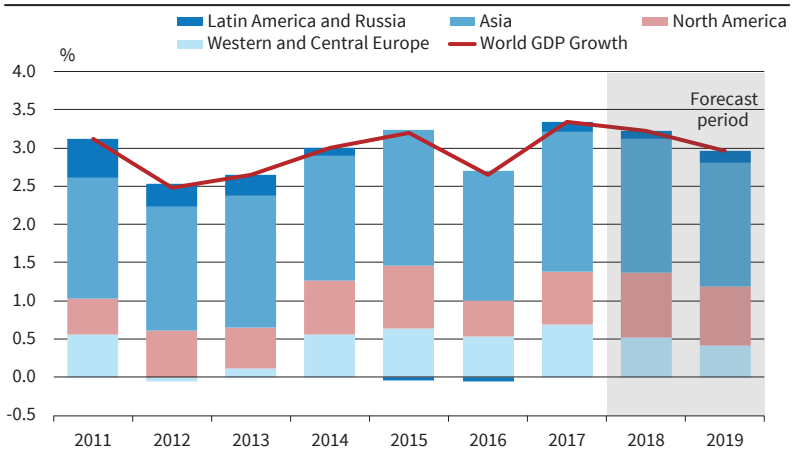
Among the major regions, only the growth contribution coming from Latin America and Russia is expected to increase compared to last year (see Figure 1.30). Most world regions will see declining growth rates, albeit starting from quite different levels. The strongest impulse will continue to come from Asia. Its contribution will again be larger than the combined contribution of North America and Europe together. The US economy will continue to grow more strongly than that of the euro area, and particularly than the Japanese economy (see Figure 1.31).

1.4.3 United States

This year, the strong momentum seen in the US economy in 2018 will normalise as the effects of the fiscal impulses abate, while private consumption will continue to benefit from the good labour market situation and real wage increases at the same time. Although the US economy will not be able to build on last year's strong expansion, it should still expand at rates above potential growth this year. Despite rising prices, private consumption will develop robustly due to strong growth in disposable income and high consumer confidence. A lengthy partial shutdown of the federal government at the beginning of this year will have a negative impact on public consumption expenditure. Overall capacity utilisation is already very high and the degree of monetary expansion is likely to be further reduced in view of rising wages and prices. Together with uncertainty over the future shape of cross-border value chains due to trade distortions, this will have a dampening effect on investment. Foreign trade is likely to lose

Figure 1.30

Regional Contributions to World GDP Growth[a]



[a] Based on market weights.

Source: National statistical offices; EEAG calculations and forecast.

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momentum. GDP growth of 2.6 percent is expected for this year.

Last year's change in consumer prices amounted to 2.4 percent. With core inflation picking up slightly, but the contribution from energy prices abating, this year's inflation rate is expected to end up being 2.1 percent. After four rate hikes in 2018, the US Federal Reserve will proceed more cautiously in order not to stifle the economy. It will, however, continue along the path of a gradual normalisation of monetary policy, and raise its Federal Funds rate target range twice this year to achieve a federal funds target rate of 3 percent by the end of 2019. The US Federal Reserve has communicated that it will allow 50 billion US dollars each month to run off the balance sheet, which is largely a portfolio of bonds that the central bank purchased to stimulate the economy during and after the financial crisis. This, however, might turn out to be an upper limit in case of a further weakening of the economy and disruptions in financial markets.

1.4.4 Asia

While market sentiment in *China* has weakened in recent months, consumer confidence is still at historically high levels. Like the markets, China's government also appears to fear a slowdown in economic activity and has taken expansionary fiscal measures and loosened monetary policy. China's leaders are, as in the past, likely to continue to strive to maintain economic momentum through state intervention. The aim of reducing the minimum reserve ratios is to provide financial institutions with more funds so that claims against non-performing debtors can be converted into participations and the very high level of indebtedness of companies can be reduced in an orderly fashion. Nevertheless, high debt levels remain a risk for the economy and further delays in reducing imbalances in the Chinese economy are increasing the risk of a sudden economic collapse. Even although the risk of a sharp downturn has increased, signs of a soft landing still prevail. In this environment, the expansion of the Chinese economy is likely to slow gradually over the forecast period, falling from 6.6 percent last year to 6.1 percent this year. Inflation is forecast to pick up to 2.4 percent this year, after 2.1 percent in 2018.

In *Japan*, foreign trade impulses will continue to decline this year, especially since the economy of important trading partners will weaken. On the other hand, preparations for the 2020 Olympic Games in Tokyo will increase public investment. The private domestic economy is likely to expand at a similar pace as last year. Overall, the pace of expansion can be expected to slow slightly. After expected GDP growth of 0.8 percent last year, the expansion rate is forecast to be 0.7 percent this year. The Bank of Japan has lowered its inflation forecast for the period up to 2020 and is likely to maintain its expansive monetary policy course. A long-delayed increase by two percentage points in Japan's consumption tax will take effect in October 2019. After the previous hike in April 2014, this measure is supposed to be the next act in initiating fiscal consolidation in the years ahead, which in light of a public debt of almost 240 percent of GDP, is desperately needed. This will have a temporary, but clear impact on inflation dynamics. Inflation is likely to rise to 1.2 percent after 1.0 percent in 2018.

India's medium-term growth prospects remain strong. Benefiting from fiscal impulses in face of the national parliamentary elections in spring 2019 and from ongoing structural reform, the domestic economy continues to perform well. India will nevertheless also feel the impact of the global economic slowdown. For 2019, an overall growth rate of 7.3 percent is expected. Inflation, on the other hand, is expected to pick up to 5 percent this year. The higher inflation rate is a result of a narrowing output gap, pass-through effects from higher energy prices and the exchange rate depreciation witnessed last year.

For the remaining East and Southeast Asian region (South Korea, Indonesia, Taiwan, Thailand, Hong Kong, Malaysia, Singapore and the Philippines) growth dynamics will continue to slow down somewhat. In particular, the slowdown of growth in China will have a dampening effect on the entire Asian region.

General elections will be held in Indonesia in April. For the first time in Indonesian history, the president, the vice president, and members of the People's Consultative Assembly, will be elected on the same day. Should a religious fundamentalist win these elections and replace the current moderate and pragmatic government, Indonesia might be heading to a currency crisis and thereby though economic future, as investors are likely to leave the country. The Rupiah has already witnessed an effective depreciation of more than 6 percent last year.

1.4.5 Latin America and Russia

The Latin American economy (Brazil, Mexico, Argentina, Venezuela, Colombia, and Chile) is improving, but forecasts remain cautious. Despite the ongoing recovery, the medium-term outlook for commodity exporters is generally subdued. Growth in Mexico is expected to increase as it is supported by the good economic situation in the United States. However, continuing uncertainty in the trade sector has somewhat weakened the outlook for domestic demand. Brazil's recovery is picking up speed. More specifically, the recovery of private demand will allow the output gap to be gradually closed. However, tighter external financial conditions and the unclear economic agenda of the new government elected last year are a source of risk for this outlook. The recent turmoil in the financial markets, high real interest rates and

faster fiscal consolidation under the IMF Stand-By-Agreement approved last June mean that Argentina's economy will remain in recession this year. However, the light at the end of the tunnel is visible; the continued implementation of reforms and the return of confidence will improve trend growth throughout the year. There is still no end in sight to the economic crisis in Venezuela. Its economy is expected to shrink for the fifth consecutive year. For the region as a whole, but excluding Venezuela because of extraordinary high inflation rates, the increase in aggregate production will accelerate to 1.9 percent after 1.2 percent last year. In view of the depreciation against the US dollar, a stronger rise in prices and a tightening of monetary policy are expected in most of these countries.

The Russian economy was somewhat stimulated last year by the rise in oil prices and the associated increase in export earnings. In turn, the fall in oil prices is now putting a drag on the economy. A VAT increase from 18 percent to 20 percent in January will also dampen private consumption in the quarters ahead. By contrast, industrial production growth will remain stable. Overall, GDP will increase by 1.4 percent this year after 1.6 percent in 2018.

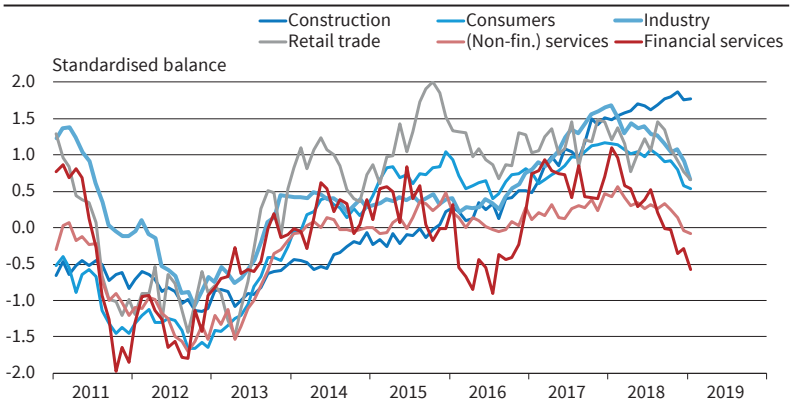
1.4.6 European Economy

Cyclical Situation

Most economic indicators for the European Union have fallen continuously in recent months. For instance, the Economic Sentiment Indicators of the European Commission for both the euro area and the European Union reached their peaks in December 2017 and have since almost continuously declined gradually, although remaining above their long-run averages. A similar picture emerges from the confidence indicators of the European Commission. Except for the construction sector, all sector-specific confidence indicators, as well as consumer confidence, are declining. Financial services in particular have seen a substantial change for the worse during 2018 (see Figure 1.32). At the end of last year, the confidence indicator for this sector fell below its long-term average. Only the construction sector is bucking the general trend. The confidence indicator for this sector hit an all-time high.

Figure 1.32

Confidence Indicators[a] for Different Sectors in the European Union



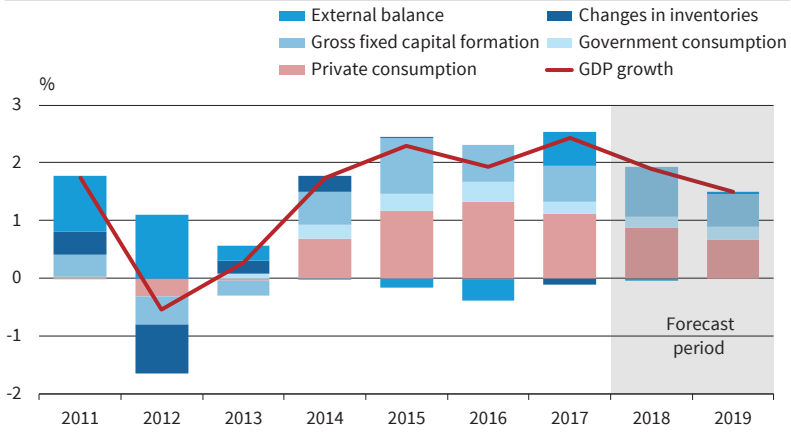
[a] Arithmetic means of selected (seasonally adjusted) balances on business and consumer tendency survey questions. Balances are the differences between the percentages of positive and negative replies. These are subsequently normalised to have an average of 0 and variance of 1 for the period from 1985 onward.
Source: European Commission; last accessed on 3 February 2019; EEAG calculations.

Business surveys indicate that the deterioration in sentiment was mainly due to a clouding over of export expectations and a poorer assessment of order backlogs. As the economy weakens, the pace of investment, and exports in particular, is likely to slow down. Consumer confidence is also declining. Private consumption is nevertheless expected to remain the mainstay of the economy this year, not least as a result of the good situation in the labour market (see Figure 1.33).

This winter, GDP in the European Union is likely to gain some momentum again, driven by catch-up effects. The economy is expected to slowly weaken in the subsequent quarters. The reason for this is partly that the increasing over-utilisation of macroeconomic production capacity no longer permits any

Figure 1.33

Demand Contributions to GDP Growth in the European Union [a]



[a] Gross domestic product at market prices (prices of the previous year). Annual percentage change.
Source: Eurostat; last accessed on 3 February 2019; EEAG calculations and forecast.

major leaps. The weakening is also partly due to political developments like the international trade conflict, the risk of a revival of the dispute over Italy's budget and associated financial market risks, which are increasingly putting pressure on companies' propensity to invest. In addition, as the economy weakens, risk sensitivity normally increases, which has a negative impact on the economy. Rising wages and continued good consumer sentiment should nevertheless ensure robust growth in private consumption. Fiscal impulses in Germany and Italy will also have a supporting effect. Overall, we forecast GDP growth of 1.5 percent for the European Union this year (see Figure 1.34).

As a result of the economic slowdown, the outlook for the labour market is not likely to improve much further. Employment is projected to increase at rates close to 1 percent, which is significantly below the rates generally experienced over the last four years (see Figure 1.35), but will still be sufficient to reduce unemployment rates somewhat further.

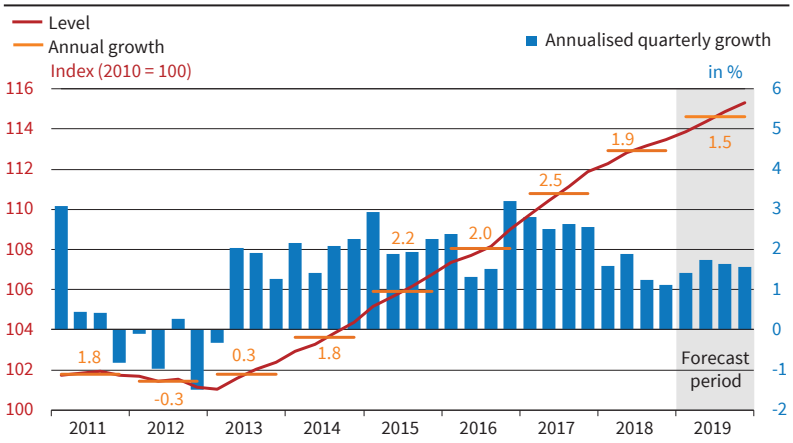
The unemployment rate is expected to fall to 6.3 percent this year, after 6.9 percent in 2018 (see Figure 1.36). The differences between the EU member states remain substantial. Greece, Spain, and Italy will continue to have the highest unemployment rates. In Germany and the Netherlands only minor declines can be expected due to the largely exploited labour force potential.

As in 2018, the average inflation rates for the euro area and the European Union are expected to be 1.7 percent and 1.8 percent respectively. On the one hand, the recent fall in energy prices will put downward pressure on inflation. At the beginning of the year, Brent crude oil cost around 55 US dollars per barrel, significantly less than in October when it peaked at 85 US dollars per barrel. On the other hand, high capacity utilisation, rising employment and stronger wage increases will lead to an increase in core inflation, i.e. the inflation

Figure 1.34

Real GDP in the European Union

Seasonally adjusted data

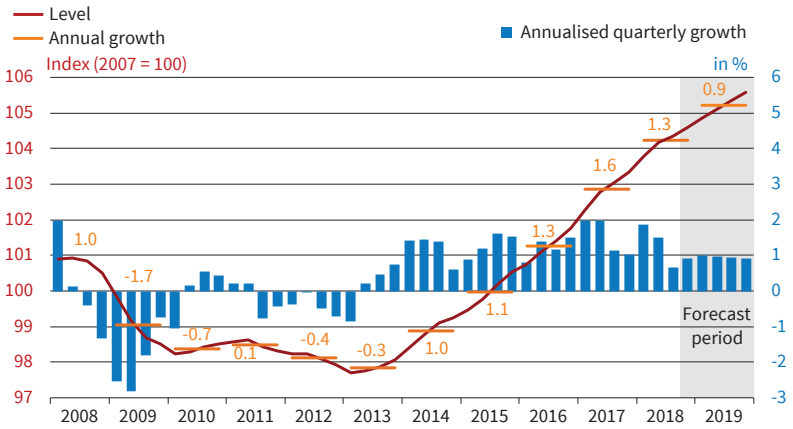


Source: Eurostat; last accessed on 3 February 2019; EEAG calculations and forecast. © CESifo

Figure 1.35

Employment in the European Union

Seasonally and work-day adjusted data

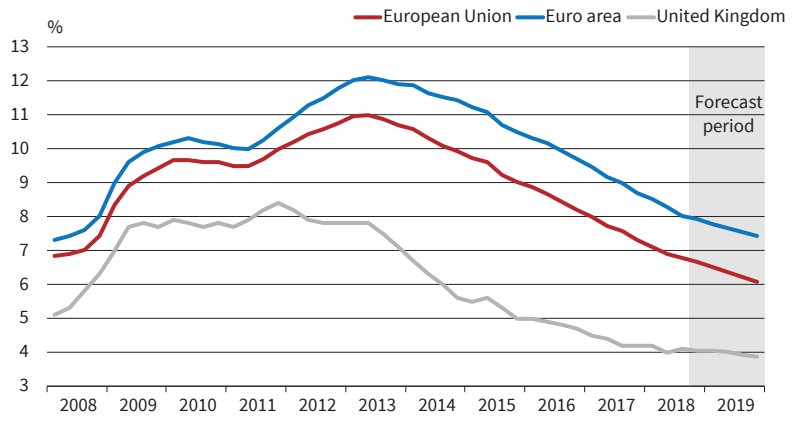


Source: Eurostat; last accessed on 3 February 2019; EEAG calculations and forecast. © CESifo

Figure 1.36

Unemployment Rates in the Euro Area, the United Kingdom and the European Union

Seasonally adjusted data



Source: Eurostat; last accessed on 3 February 2019; EEAG calculations and forecast. © CESifo

rate excluding energy and food prices. The core rate in the euro area is expected to average 1.2 percent this year, after just 1.0 percent last year. There are still differences between the largest euro area countries. The general price increase in Germany is expected to be the strongest. France and Spain form the midfield. Inflation in Italy is likely to remain low due to the weak economy and comparatively high unemployment.

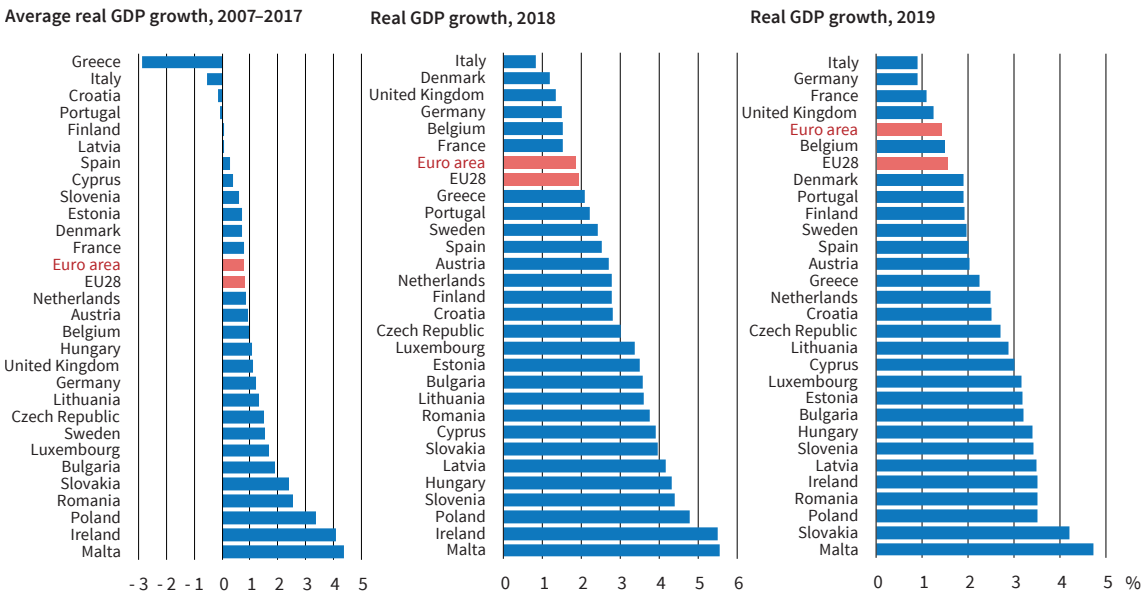
Developments in Selected Member States

As for most countries, the downside risks for *Germany* also currently outweigh the upward opportunities. In addition to the international risks already mentioned (trade dispute and emerging markets) and Europe-specific risks (Brexit and the latent budget dispute between Italy and the European Union), there is uncertainty about the further development of the German automotive industry in which traditional, but nowadays disreputable diesel combustion engines still play an important role. However, economic sentiment has also deteriorated in other sectors of the economy. This year, GDP is expected to initially expand at slightly higher rates than at the end of last year. The fiscal side in particular should stimulate public and private consumption. The manufacturing sector is not expected to provide an above-average stimulus for the German economy in the further course of the year, as foreign sales markets are slowly losing momentum. The German economy has thus left the export-led boom behind and entered a phase of cooling. There is no recession in sight, however, as domestic economic forces remain intact. The expansion will be supported by the economic situation in the construction industry, which remains favourable, and by household consumer spending, which will continue to benefit from the very good labour market situation, expanding real incomes and favourable financing conditions. The cooling of the German economy will be accompanied by declining over-utilisation, with overall economic production expanding at a slower rate than production potential. German GDP is expected to increase by only 0.9 percent this year (see Figure 1.37). Employment growth will weaken not only due to slower growth, but also as labour supply is becoming increasingly scarce. In view of the slower rise in employment and the subdued development of macroeconomic output, the decline in unemployment will continue at a slower pace. Inflation is, for German standards, expected to remain strong. The annual average inflation rate will rise from a projected 1.7 percent last year to 2.1 percent this year. Rising wage costs due to ongoing tensions in the labour market are likely to aggravate price pressures.

In the *United Kingdom*, inflation should gradually weaken from a projected 2.3 percent last year to 2.0 percent this year. Due to the stabilised price situation, there is currently no hurry for the Bank of England to raise interest rates. In line with the ECB, it will probably carry out its next rate hike in the winter of 2019/2020. Developments in the UK economy have been significantly influenced by whether, and in what form the country will leave the European Union. This forecast is based on the assumption that the United Kingdom will still have full access to the European single market from 30 March 2019 onwards. The current uncertainty about Britain's future relationship with the European Union is also expected to disappear in spring 2019, leading to catch-up effects in investment. The economy is also supported by an expan-

Figure 1.37

Economic Growth in EU Member Countries



Source: Eurostat; last accessed on 3 February 2019; 2018 and 2019: EEAG forecast.

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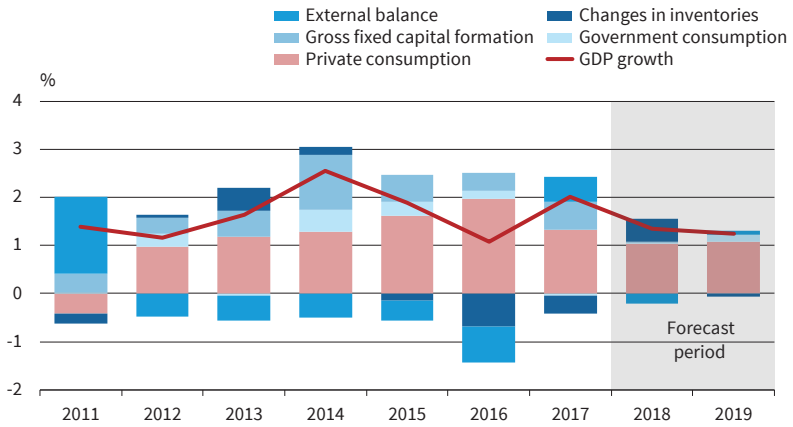
Figure 1.38
Demand Contributions to GDP Growth in the United Kingdom [a]



[a] Gross domestic product at market prices (prices of the previous year). Annual percentage change.
Source: Eurostat; last accessed on 3 February 2019; EEAG calculations and forecast.

sive fiscal policy. Overall, GDP is forecast to expand by 1.3 percent, after a projected 1.3 percent last year. The demand component with the largest contribution to overall growth and, therefore, the stabilising factor of the economy is again going to be private consumption (see Figure 1.38). Although tariffs on trade with the European Union are assumed to remain at zero in our forecast, non-tariff costs are likely to increase moderately reducing the country's medium-term prospects for growth.

In a response to the House of Commons Treasury Committee, the Bank of England has outlined the possible consequences for the United Kingdom of a chaotic "hard Brexit". In this case, tariffs and other trade barriers will apply at the border after March 2019. Large queues will arise, because the British and European border infrastructure is not yet able to handle the extra and unclear customs requirements smoothly. According to the Bank of England, in a scenario in which interest rates and risk premiums would also increase and productivity would be affected negatively, the UK's GDP will fall by around 8 percent in the second quarter of 2019.[3] By comparison, during the winter of the financial crisis in 2008/2009, the GDP loss in the United Kingdom was around 4 percent. Whereas the rise in trade barriers between the United Kingdom and the European Union would imply sizable losses for the UK economy, it would, albeit to a lesser extent, have negative impacts on its trading partners as well.

The yellow vests movement in *France* is likely to have a negative impact on France's further economic development. Not only will it lead to slower structural reforms of the French economy, it will also directly damage France's economic image. Both foreign investors and tourists are being deterred by the recordings of violent protests that have gone around the world. On the other hand, the fiscal measures announced by the government to appease the protesters are likely to have a small, but positive short-term effect on consumption. Furthermore, household purchasing power has increased as employment growth remains strong and the reduction in housing tax and some social contributions has taken effect. The unemployment rate is falling and the dependence on subsidised jobs and fixed-term contracts has been reduced. All this is supporting private consumption. Shortages of highly-skilled labour are increasing and wage growth has accelerated. However, the unemployment rate is still high. Last year's labour market reforms will help reduce the structural unemployment and improve the integration of low-skilled workers. Together with tax reforms, this will support business investment and exports. At the same time, however, weaker international dynamics will have a negative impact on economic activity. Overall, economic growth is forecast at 1.1 percent this year.

Despite expansionary fiscal policy, growth in the Italian economy is likely to remain below 1 percent this year. High uncertainty and rising interest rates will lower the propensity of households and firms to consume. In addition, slower growth among Italy's main trading partners will hinder export growth. The investment recovery, although moderate, will continue to support growth. Inflation in Italy is likely to remain low due to its weak economy and comparatively high unemployment rate.

Each of the four largest economies of the European Union is expected to grow below 1.5 percent, which will weigh on overall European growth. All other EU countries will grow at a faster pace this year, i.e. by 1.5 percent or more (see Figure 1.37). In addition, the economies of Central and Eastern Europe will continue to grow, albeit in almost all of these countries at a slightly slower pace than last year due to weaker momentum coming from Europe and the rest of the world. Since unemployment is decreasing more slowly than previously, the positive impetus from domestic demand will also decline somewhat. Interest rates, which remain low, will continue to support investment dynamics.

[3] See https://www.bankofengland.co.uk/report/2018/eu-withdrawal-scenarios-and-monetary-and-financial-stability.

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APPENDIX 1.A
Forecasting Tables

Table 1.A.1

GDP Growth, Inflation, and Unemployment in Various Countries

	Share of total GDP in %	GDP growth			CPI inflation			Unemployment rate[a]		
		in %								
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Industrialised countries:										
EU 28	24.8	2.5	1.9	1.5	1.7	1.8	1.8	7.6	6.9	6.3
Euro area	18.1	2.5	1.9	1.4	1.5	1.7	1.7	9.1	8.2	7.6
United Kingdom	3.8	1.8	1.3	1.3	2.7	2.3	2.0	4.4	4.1	4.2
Switzerland	1.0	1.7	2.6	1.6	0.5	0.9	0.6	4.8	4.5	4.1
Norway	0.6	1.9	1.7	2.0	1.9	2.8	2.1	4.2	3.7	3.6
Western and Central Europe	26.3	2.5	2.0	1.6	1.7	1.8	1.8	7.5	6.8	6.2
US	27.9	2.2	2.9	2.6	2.1	2.4	2.1	4.4	3.8	3.5
Canada	2.4	3.0	2.1	2.0	1.6	2.3	2.1	6.3	6.0	6.0
Japan	7.0	1.7	0.8	0.7	0.5	1.0	1.2	2.9	2.6	2.6
Industrialised countries (total)	**63.5**	**2.3**	**2.2**	**1.**	**1.7**	**2.0**	**1.9**	**6.1**	**5.5**	**5.1**
Newly industrialised countries:										
China	17.2	6.9	6.6	6.1	1.6	2.1	2.4			
India	3.7	6.2	7.6	7.3	3.3	4.0	5.0			
Russia	2.3	1.5	1.6	1.4	3.7	2.8	4.0			
East Asia[b]	7.0	4.0	3.9	3.6	2.2	2.1	2.3			
Latin America[c]	6.3	1.6	1.2	1.9	7.3	7.9	8.0			
Newly industrialised countries (total)	**36.5**	**5.0**	**4.9**	**4.7**	**3.0**	**3.3**	**3.7**			
Total[d]	**100.0**	**3.3**	**3.2**	**3.0**	**2.2**	**2.5**	**2.5**			
World trade growth in %[e]		**4.7**	**3.5**	**3.0**						

[a] Weighted average of Indonesia, Korea, Malaysia, Tawain, Thailand, Philippines, Singapore, and Hong Kong. Weighted with the 2017 levels of GDP in US dollars; [b] Weighted average of Brazil, Mexico, Argentina, Colombia, and Chile. Weighted with the 2017 level of GDP in US dollars; [c] Weighted average of the listed groups of countries; [d] Standardised unemployment rate; [e] Trade of goods.

Source: EU; OECD; IMF; ILO; National Statistical Offices; CPB. 2018 and 2019: EEAG forecast.

Table 1.A.2

GDP Growth, Inflation, and Unemployment in EU Countries

	Share of total GDP in %	GDP growth			Inflation[a]			Unemployment rate[b]		
		in %								
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Germany	21.3	2.5	1.5	0.9	1.7	1.7	2.1	3.8	3.4	3.1
France	14.9	2.3	1.5	1.1	1.2	2.1	1.6	9.4	9.0	8.6
Italy	11.2	1.7	0.8	0.9	1.3	1.2	1.2	11.2	10.6	10.4
Spain	7.6	3.0	2.5	2.0	2.0	1.7	1.6	17.2	15.4	13.3
Netherlands	4.8	3.0	2.8	2.5	1.3	1.6	2.0	4.9	3.9	3.5
Belgium	2.9	1.7	1.5	1.5	2.2	2.2	1.9	7.1	6.0	6.3
Austria	2.4	2.7	2.7	2.0	2.2	2.0	2.0	5.5	4.9	4.7
Finland	1.9	7.3	5.5	3.5	0.3	0.7	1.2	6.7	5.3	5.1
Portugal	1.5	2.8	2.8	1.9	0.8	1.2	1.5	8.6	7.6	7.2
Greece	1.3	2.8	2.2	1.9	1.6	1.2	1.6	9.0	7.0	6.5
Ireland	1.2	1.5	2.1	2.2	1.1	0.8	1.2	21.5	19.5	18.0
Slovakia	0.6	3.2	4.0	4.2	1.4	2.5	2.4	8.1	6.6	6.5
Luxembourg	0.3	5.3	4.4	3.4	1.6	1.9	2.2	6.6	5.3	5.3
Slovenia	0.4	1.6	3.4	3.2	2.1	2.0	1.9	5.6	5.3	5.2
Lithuania	0.3	4.2	3.6	2.9	3.7	2.5	2.2	7.1	6.2	6.2
Latvia	0.2	5.0	4.2	3.5	2.9	2.6	2.5	8.7	7.4	7.2
Estonia	0.2	4.8	3.5	3.2	3.7	3.4	2.9	5.8	5.6	6.4
Cyprus	0.1	4.2	3.9	3.0	0.7	0.8	1.6	11.1	8.8	7.1
Malta	0.1	6.7	5.5	4.7	1.3	1.7	2.0	4.0	3.8	4.0
Euro area[c]	**72.9**	**2.5**	**1.9**	**1.4**	**1.5**	**1.7**	**1.7**	**9.1**	**8.2**	**7.6**
United Kingdom	15.2	1.8	1.3	1.3	2.7	2.3	2.0	4.4	4.1	4.2
Sweden	3.1	2.4	2.4	2.0	1.9	1.9	1.8	6.7	6.3	6.2
Denmark	1.9	2.3	1.2	1.9	1.1	0.7	1.6	5.7	4.9	5.1
EU 22[c]	**93.0**	**2.4**	**1.8**	**1.4**	**1.7**	**1.8**	**1.8**	**8.2**	**7.5**	**7.0**
Poland	3.0	4.8	4.8	3.5	1.6	1.2	2.7	4.9	3.9	3.4
Czech Republic	1.2	4.6	3.0	2.7	2.4	1.9	2.3	2.9	2.2	2.6
Romania	1.2	6.8	3.8	3.5	1.1	4.0	3.1	4.9	4.2	4.5
Hungary	0.8	4.4	4.3	3.4	2.4	2.8	3.3	4.2	3.7	3.3
Bulgaria	0.3	3.8	3.6	3.2	1.2	2.6	2.2	6.2	5.4	5.7
Croatia	0.3	3.0	2.8	2.5	1.3	1.6	1.5	11.1	8.6	9.4
New Members[d]	**8.4**	**4.8**	**4.1**	**3.3**	**1.8**	**2.2**	**2.6**	**4.9**	**4.1**	**4.0**
EU 28[c]	**100.0**	**2.6**	**1.9**	**1.5**	**1.7**	**1.8**	**1.8**	**7.6**	**6.9**	**6.3**

[a] Harmonised consumer price index (HICP); [b] Standardised unemployment rate; [c] Weighted average of the listed countries; [d] Weighted average over Slovakia, Slovenia, Lithuania, Latvia, Estonia, Poland, the Czech Republic, Romania, Hungary, Croatia and Bulgaria.

Note: GDP growth rates are based on the calender adjusted series except for Ireland, Slovakia and Romania for which Eurostat does not provide working day adjusted GDP series.

Source: Eurostat; 2018 and 2019: EEAG forecast.

Tab 1.A.3

Key Forecast Figures for the European Union

	2017	2018	2019
	Percentage change over previous year		
Real GDP	2.5	1.9	1.5
Private consumption	2.1	1.6	1.2
Government consumption	1.0	0.9	1.0
Gross fixed capital formation	2.5	4.3	2.7
Exports of goods and services	5.6	2.6	2.6
Imports of goods and services	4.4	2.8	2.7
Net exports[a]	0.6	0.0	0.0
Consumer prices[b]	1.7	1.8	1.8
	Percentage of nominal GDP		
Government fiscal balance[c]	– 1.0	– 0.7	– 0.8
	Percentage of labour force		
Unemployment rate[d]	7.6	6.9	6.3

[a] Contributions to changes in real GDP (percentage of real GDP in previous year); [b] Harmonised consumer price index (HCPI); [c] 2018 and 2019: forecasts of the European Commission; [d] Standardised unemployment rate

Source: Eurostat; 2018 and 2019: EEAG forecast.

Table 1.A.4

Key Forecast Figures for the European Area

	2017	2018	2019
	Percentage change over previous year		
Real GDP	2.5	1.9	1.4
Private consumption	1.7	1.3	1.2
Government consumption	1.2	1.0	1.2
Gross fixed capital formation	2.9	3.2	2.4
Exports of goods and services	5.4	3.0	3.0
Imports of goods and services	4.1	2.9	3.1
Net exports[a]	0.8	0.2	0.1
Consumer prices[b]	1.5	1.7	1.7
	Percentage of nominal GDP		
Government fiscal balance[c]	– 1.0	– 0.6	– 0.8
	Percentage of labour force		
Unemployment rate[d]	9.1	8.2	7.6

[a] Contributions to changes in real GDP (percentage of real GDP in previous year); [b] Harmonised consumer price index (HCPI); [c] 2018 and 2019: forecasts of the European Commission; [d] Standardised unemployment rate

Source: Eurostat; 2018 and 2019: EEAG forecast.

Coping (or not) with Change

2.1 INTRODUCTION

The European Union's 'ever-closer-union' trajectory no longer seems realistic in the face of populist tendencies in many of its member countries. Tendencies towards disintegration are not only emerging at an EU level, but also within nation states, as today's populism is also promoting more individualist attitudes. The prospect of economic losses does not seem to deter voters, who do not see any of the gains coming to them from supporting anti-immigration nationalists.

Europe's centrifugal tensions make it increasingly similar to the late Habsburg Empire, a powerful symbol of the problems of integration in a multinational, multi-linguistic, and multi-ethnic society. The Habsburg Empire was divided, and appeared to be doing less well (i.e. growing less successfully) than rival states (Germany or Russia). After its collapse, the problems of social division and low growth remained unresolved. As a result, many of the Empire's former citizens developed a deep nostalgia for a setting that contrasted with the intolerant nationalism of the successor states, but in its last decades, most of the monarchy's subjects felt only dissatisfaction and resentment.[1] These sentiments, as well as the constant search for linguistic reformulations that bridge deep divisions of interest, appear uncannily familiar in modern Europe. Like the Habsburg Empire, the European Union is incomplete and unstable.

The overarching aim[2] of the European Union is to foster economic and political integration in Europe leading to balanced economic growth, full employment and social progress. Economic integration – the Single Market, the Economic and Monetary Union of the European Union (EMU) etc. – is perceived to ensure convergence to higher levels of material well-being across Europe. This development is expected to reinforce political integration and deepen the Union.

Actual developments leave a more blurred picture. There has definitely been progress in some areas, but economic differences persist across EU countries and even seem to be growing in some cases. The centripetal forces expected to be generated by economic integration are contested by centrifugal forces.

EU enlargement raised concerns over heterogeneities and a core-periphery divide between the 'old' and the 'new' member states. However, experience has shown a more mixed picture. Some new member countries – like the Czech Republic, Slovenia and Slovakia – have been catching up to high income countries, and this has contributed to convergence within the European Union. Among the 'old' EU countries (EU-15), however, there has been no convergence over the last two to three decades. The observed convergence for the EU-28 or EMU countries is thus driven by some Eastern countries catching-up, as documented in EEAG (2018).

The bleak economic performance in many countries is contributing to a widespread perception that current societal developments are not serving ordinary people. Problems are widely attributed to economic integration going too far and the European Union being unable to cope with the resulting situation. Developments are falling short of promised and expected trajectories, the prevailing policies and institutions are drawing criticism, and support for cooperative solutions within the European Union is dwindling. There are tendencies towards disintegration, while nationalism and populism are on the rise. The EU integration trajectory no longer seems realistic in view of the economic and political forces working against it.

What went wrong? Perhaps too much was promised, and convergence was seen as an automatic response to economic integration. Countries are continuously affected by shocks and changes; some global, some country-specific. Some are short-lived while others are longer-lasting, not least structural changes. Transformations due to technological changes, globalisation etc. are particularly important, as they are a source of progress, but societal gains do not come automatically. To reap such gains, adjustments are necessary – across firms, sectors, geographical areas, types of labour/qualifications etc. – and some policies and institutions may be better apt to handle such changes than others.

[1] There are many powerful literary evocations of the Habsburg world in the works of authors like Joseph Roth, Stefan Zweig, and Felix Salten. One of the most striking, only recently translated into western languages, is the Transylvanian trilogy written by the Hungarian politician Miklós Bánffy, published in Hungarian between 1934 and 1940. It gives a clear indictment of the failure of the ruling class. The second volume opens with a debate in Hungary in 1906 about the need for a separate National Bank and about the customs union in the Hungarian half of the Dual Monarchy. There is talk about a reformulation so that the customs arrangements should be termed customs treaty rather than customs union

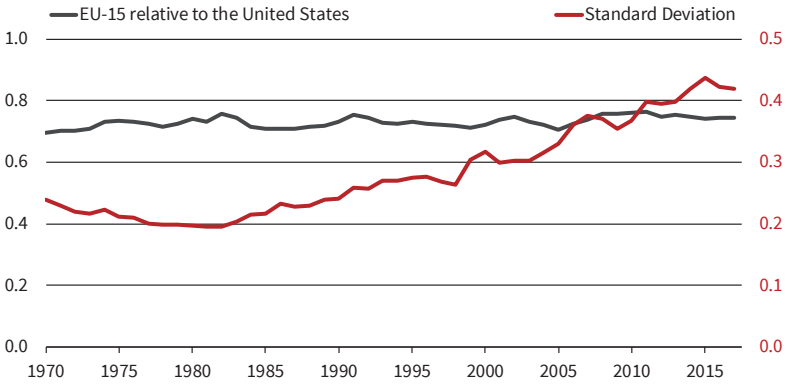
[2] The European Union shall, according to the Treaty "… work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance." (Consolidated Version of the Treaty on European Union, Article 3)

EEAG (2019), "Coping (or not) with Change",
EEAG Report on the European Economy, CESifo, Munich, pp. 38–60.

This chapter studies interactions between country-specific structural changes and reforms, or the lack thereof. We focus on structural change and reform patterns across the EU-15 countries given the particularly striking lack of convergence across these countries after decades of integration, and study some country experiences in detail. There is much to learn from Italy, which has been a laggard in recent decades, but it is not the only country experiencing increasingly turbulent politics and persistent productivity slowdowns. We also review the more positive shock and reform experiences of those countries that managed to break out of relative decline, namely Denmark, the Netherlands, Sweden, Finland, and Germany.

Figure 2.1

Per Capita Income in the EU-15 relative to the United States, 1970–2017



Note: Per capita income is measured in current prices and current purchasing power parities. The EU-15 average is weighting countries according to population sizes. The standard deviation is computed for relative incomes of EU-15 countries, i.e. the country-specific per capita income relative to the EU-15 average, running 5-year averages.

Source: OECD.

We trace poor country-specific economic performance to its sources. Bad outcomes can merely reflect bad luck: a country's territory may, for example, expose it more heavily than others to the bad or good consequences of climate change, or migration pressures. But it is more interesting to trace their roots back to unsuitable institutions or policies. These can magnify the negative implications of a changing world not only when they become obsolete and fail to be reformed, but also, and perhaps more importantly, when they do not even out the costs and benefits of shocks and reforms in such a way as to make change politically acceptable.

The chapter starts by briefly summarising economic developments across EU-15 countries, pointing to the large variations between them and the lack of convergence (Section 2.2). This leads to a discussion of how economic (and political) integration may or may not imply convergence (Section 2.3) and the notion of competitiveness often used when discussing country developments (Section 2.4). The political economy of reforms or absence hereof is then discussed (Section 2.5) before turning to country experiences. We illustrate more general points analysing the case of Italy, one of the nations barking at the Habsburg heels (Section 2.6), and briefly consider a few examples of more successful reform countries (Section 2.7). Some concluding remarks are offered in Section 2.8.

2.2 DIVERGENCE OR CONVERGENCE IN EUROPE?

Economic performance can be compared along many dimensions. Here attention is restricted to one key variable, per capita income. While there are measurement problems and per capita income is not one-to-one related to welfare, it is an important variable and a widely used metric in international comparisons of economic performance. Trade-offs with other objectives like inequality are important, but are beyond the scope of this chapter.

Considering the EU-15[3] as an entity, its development since the 1970s has been rather steady. Using per capita income relative to the United States as a performance indicator, the gap between the EU-15 and the United States has been slightly reduced over the period 1970 to 2017. Hence, average growth in per capita income has been roughly on par with US growth. EU-15 countries have not moved closer to the United States – an objective that has been mentioned occasionally – but the gap has not grown either. In terms of single country performances, however, major differences exist, which have not diminished over time. In Figure 2.1, we also report the standard deviation of relative incomes across EU-15 countries (country specific per capita income relative to EU-15 per capita income, and smoothened to eliminate short run business cycle fluctuations). Country differences have widened[4], especially after the mid-1990s.

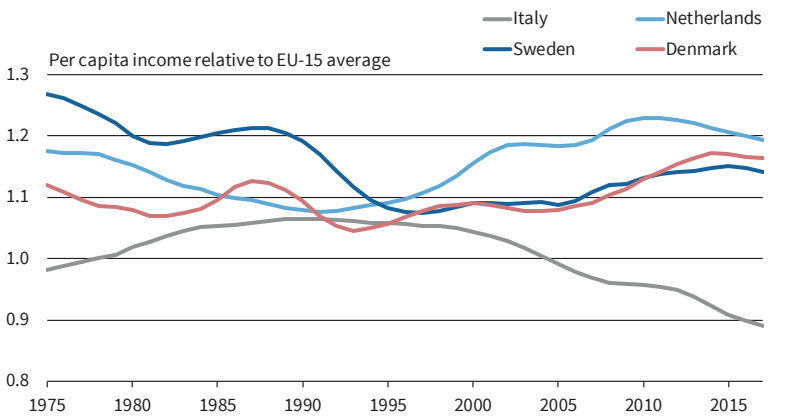
To elaborate on the different country experiences, Figures 2.2–2.4 plot the development in relative incomes for different groups of EU-15 countries.[5] To highlight systematic country differences rather than business cycle effects, 5-year averages are shown. The developments for Italy, Denmark, the Netherlands, and Sweden show very interesting, but different patterns. For Denmark, the Netherlands, and Sweden there is a U-shaped pattern – first a decline and then

[3] EEAG (2018) consider convergence for EU-28, EU-15 and Euro Area countries in more detail.

[4] The standard deviation is calculated based on relative incomes here. If computed using log-relative incomes, the increase in dispersion is less pronounced, as may be expected since the log-function is concave.

[5] Luxembourg is not shown here. The relative income of Luxembourg is showing a trend increase from 1.49 in 1970 to 2.35 in 2017. For Luxembourg Gross National Income (GNI) is about 50 percent lower than GDP in 2017.

Figure 2.2
Income Developments in Denmark, Italy, the Netherlands, and Sweden, 1975–2017



Note: Calculated on the basis of 5-year averages to smooth out business cycle fluctuations and illustrate structural trends. For data definitions, see Figure 1.
Source: OECD.
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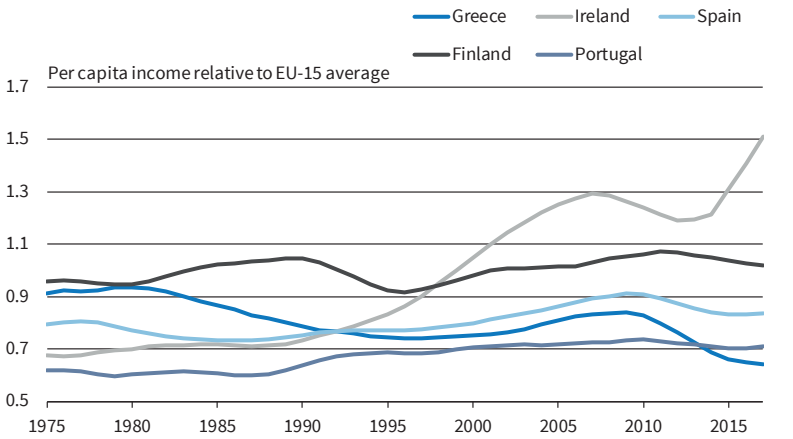
Figure 2.3
Starting Low–Relative Income Developments for Finland, Greece, Ireland, Portugal, and Spain, 1975–2017



Source: OECD.
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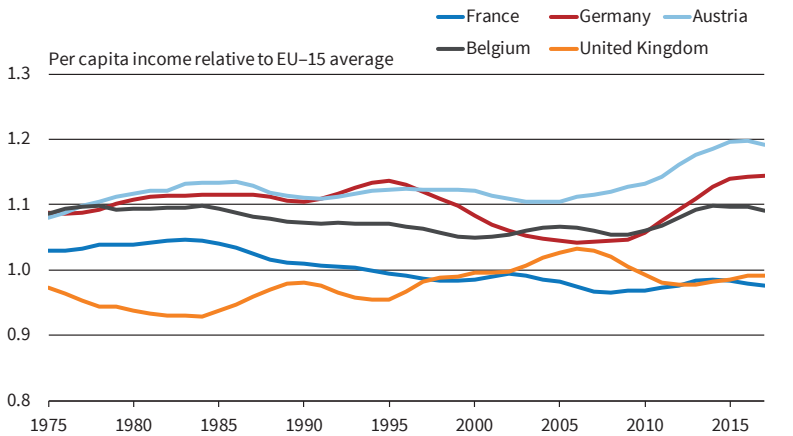
Figure 2.4
Income Developments for Austria, Belgium, France, Germany, and the United Kingdom, 1975–2017



Source: OECD.
© CESifo

an improvement. For Italy an inverted U-shaped trajectory emerges – an initial improvement followed by a deterioration in relative performance. It is striking that these countries basically had the same per capita income levels in the early 1990s. At that time Italy experienced a favourable development, catching-up to the best performers among EU-15 countries, while the other three countries lost pace and approached the average. After the early 1990s these developments reversed and the relative positions in 2017 are close to those in the 1970s. This raises the questions of why developments since the early 1990s have been so different against a background of tighter integration and other events over the period. Why did Italy run out of steam, and how did the other three countries regain their relative positions? These key questions are addressed below.

There are also other interesting developments for countries starting out below the mean as shown in Figure 2.3 (note the wider scale than in Figures 2.2 and 2.4). Finland is an interesting case as it falls in between the four countries shown in Figure 2.2. Until the early 1990s Finland experienced a favourable development much like Italy, but then experienced a large set-back in the early 1990s (the 'Soviet-shock') followed by a recovery and yet another set-back when the decline in the ICT sector (the 'Nokia-shock') coincided with the global financial crisis. Greece has experienced a general deterioration in its relative position, while Portugal and Spain are examples of countries experiencing some catching-up over the period. The same applies to Ireland, although the income metric used here may give an exaggerated impression of the improvements in living standards.[6]

[6] The income concept used is Gross Domestic Product (GDP). However, some part of GDP may be payments to foreign factors of production. For most countries, there is not a large discrepancy, but for Ireland, Gross National Income was about 20 percent lower than GDP in 2017.

Developments have been relatively steady in Austria and Belgium (see Figure 2.4), while France has experienced a soft version of the developments in Italy, with some initial improvement followed by a deterioration since the early 1980s. Developments in Germany and the United Kingdom have been more erratic. The United Kingdom has followed a path resembling Denmark, the Netherlands, and Sweden: with some initial deterioration and a trend towards improvement since the 1980s. Developments in Germany are clearly affected by unification, but it has since recovered to a relative income level on a par with the level seen in the mid-1990s.

All counties have their specific circumstances, institutions and shocks. It is beyond the scope of this report to provide a detailed account of developments in all countries. Below we consider the experience of Italy as an example of a country that has seen its relative position deteriorate over the last two or three decades, and Denmark, Finland, Germany, the Netherlands, and Sweden as examples of countries that have successfully reversed a downward trend and improved their relative economic performance.

2.3 GOOD POLICIES OR GOOD LUCK?

Explaining why country performances differ, or why economic integration has not produced more similar economic developments, raises many issues. Frequently observed favourable performances are attributed to good policies and institutions, and it is argued that we should learn from them and copy their policies. However, a set of policies and institutions may perform well under some conditions, but not under others, and caution should be exercised in drawing such simple conclusions.

A first warning against such simple reasoning is the difficulty of predicting future 'winners'. As an example, growth rates over a given period are a poor predictor of future growth rates. Figure 2.5 shows average growth rates for the periods 1990–99 and 2000–2009 for 22 OECD countries. There is no systematic or statistically significant relation between growth rates in the decade starting 1990 and the one starting in 2000.[7] Similar conclusions hold for the 1980s relative to the 1970s and the 1990s relative to 1980s. In other words, observed outcomes are very unreliable predictors of future outcomes.

In a comparative study aiming at separating the role of policies from various other factors affecting economic performance, Easterly et al. (1993, p. 430) conclude that: "… with a few exceptions, the same countries do not do well period after period; countries are 'success stories' one period and disappointments the next". Unpredictable external events (such as changes in the terms of trade) are a major determinant of country-specific growth rates.

Changes in economic conditions – shocks – can arise from both internal and external sources and thus have both country-specific and global components. Although empirical evidence[8] shows a tendency towards greater synchronisation of business cycles across countries, there are significant country differences.

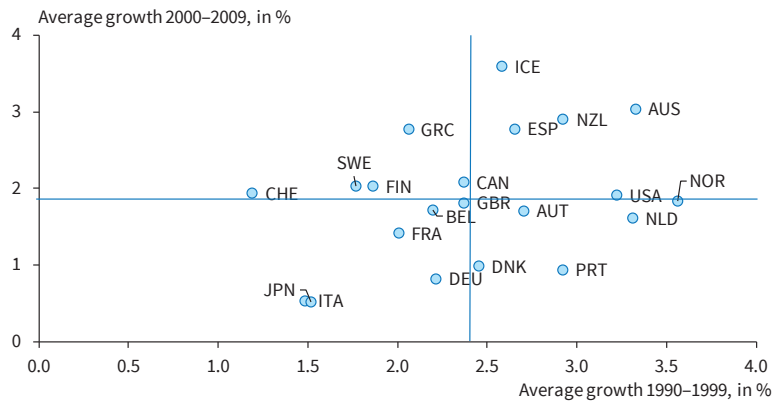
Country exposure to different types of shocks differs depending on economic structures, policies and institutions. This applies not only to business cycle shocks, but also more generally to structural changes. The role of economic integration is particularly important, as this is the most visible structural change running over recent decades, and is driven both by technological changes reducing information and transportation costs, as well as by political decisions.

Economic integration is strongly associated with convergence arguments. The removal of various barriers for trade in goods, services, and capital and for the movements of factors of production is widely assumed to release economic gains and a process of convergence. This has been the key argument underlying integration steps in the European Union including the Single Market, and the EMU etc. All of these measures were based on the idea that all countries would stand to gain and EU-wide convergence to higher living standards would follow.

While there are potential gains from economic integration, and convergence in income levels is a possible outcome, such effects are

Figure 2.5

Average Growth Rates 1990–1999 and 2000–2009 for 22 OECD Countries



Note: The vertical line marks average growth rates for the included countries over the period 1990–1999. The horizontal line marks average growth over the period 2000–2009.

Source: OECD, EEAG calculations.

[7] Note that if there is low/no catching up between countries, there will also be a low/no correlation in growth rates across periods of time.

[8] See Frankel and Rose (1998), and Duval et al. (2016). Ductora and Leiva-Leonb (2016) find a stronger global business cycle component since the early 2000s.

not automatic. Reaping the gains from economic integration requires changes and adjustments. Impediments reducing adjustment capacities – market structures, regulations, policy design etc. – reduce the benefits from integration. The labour market plays a key role. Structural changes are associated with changed qualification requirements in the labour market and reallocation of labour across firms and regions. If product and labour market rigidities impair such adjustments, convergence is impaired, and the gains from integration are lower.

The need for adjustment as a result of technological developments and economic integration is often taken to imply that all should be alike. This is a misinterpretation. Convergence in outcomes like income levels does not require that all countries should be alike in all other dimensions. On the contrary, the gains from integration come from the exploitation of comparative advantages. Countries should cultivate and exploit their comparative advantages, with convergence to higher living standards across the integrating economies becoming possible via trade and other forms of economic exchanges. No single recipe for achieving this exists. Comparative advantages are country-specific, meaning that appropriate policies and institutions also vary. There is not one unique and superior economic and political system[9] to which all countries would or should eventually convergence.[10] The point that one system may perform strongly under certain conditions, but less well under others is underlined by the facts already presented and the detailed information provided below for selected countries.

2.4 COMPETITIVENESS

Discussions of country performance often centre around the notion of competitiveness with phrases like "the need to improve Europe's competitiveness" (Europe 2020 strategy[11]) or "country x suffers from competitiveness problems". The political attention paid to competitiveness is reflected in one of the configurations of the European Council, namely the 'Competitiveness Council' (COMPET)[12] and the existence of national competitiveness boards such as, for example, the Irish National Competitiveness Council.[13] Indices ranking country competitiveness according to various measures are also regularly published. But what is meant by competitiveness and can it be related to specific policy tools?

Among firms, the notion of competition is pretty clear – they compete over customers. If firm A rather than firm B can attract a customer, it is good for firm A and bad for firm B. If firm B is not attractive to a sufficient number of customers, it goes bankrupt and disappears from the scene. In that sense, firms are in a zero-sum game and competition over customers and market share that has a clear meaning.

When it comes to countries, the situation is rather different. Countries trade with each other and gains from trade are a means of increasing economic well-being and welfare. The source of trade is comparative advantages – countries exploit their different advantages allowing for more product differentiation, specialisation etc. – which in turn makes welfare improvements possible. This is not a zero-sum game and both countries can end up being better off. A key insight from trade theory is that trade depends on comparative and not absolute advantages; and there is always room for a country in the international division of labour (Krugman, 1994). This is not the same as saying that countries will be similar, or have the same material well-being. The point is that a country cannot lose competitiveness in the sense of not being part of the international division of labour. A country always has some comparative advantages that provide a basis for international trade.

What does it then mean for a country to be competitive? To match the best high tech firms from Silicon Valley or low cost producers from China? What really matters is living standards, and countries can be competitive and having either low or high living standards. Competitiveness is not a target in itself, but is it a meaningful and useful intermediary target guiding policies to support wealth and welfare?

Competitiveness can be defined broadly and narrowly, and a very broad notion of competitiveness is associated with competitive markets (market supporting regulations) and innovation.

The report "Restoring EU Competitiveness" by the European Investment Bank (2016, p. 11) defines competitiveness as "… the ability of firms to mobilise and efficiently employ the productive resources required to successfully offer their goods and services in a global economic environment … Competitiveness is important for achieving a high standard of living and long-term sustainable gross domestic product (GDP) growth built on real gains in productivity ...".

A similar definition underpins the Global Competitiveness Index produced by World Economic Forum, where national competitiveness is defined as "… the set of institutions, policies and factors that determine the level of productivity", (World Economic Forum, 2018, p. ix). The index is based on assessments and thus sub-indices for twelve different areas grouped in basic requirements, efficiency enhancers and innovation, and sophistication

[9] However, culture (behaviour) and institutions (rules/norms) can be both more or less efficient, and the less efficient are not necessarily wiped out by international integration, and therefore convergence is not a given consequence (see, for example, Belloc and Bowles, 2017).

[10] This is related to a large body of literature discussing welfare regimes (Esping-Andersen, 1990) and the varieties of capitalism (Hall and Soskice, 2001).

[11] The Europe 2020 strategy is the EU's agenda for growth and jobs for the current decade. It emphasises smart, sustainable, and inclusive growth in order to improve Europe's competitiveness and productivity and underpin a sustainable social market economy.

[12] http://www.consilium.europa.eu/en/council-eu/configurations/compet/

[13] Available at: http://www.competitiveness.ie/

factors. The reasoning underlying the index takes a broad perspective on the concept of competitiveness (see e.g. Porter et al., 2008). So-called *foundational competitiveness* is defined as: "the expected level of output per working-age individual given the overall quality of a country as a place to do business" (Delgado et al., 2012). This concept focuses on productivity and the ability to include as many economic activities as possible.

Such broad definitions may be said to underline the point that it is hard, if not impossible, to define competitiveness precisely, and it therefore becomes synonymous with productivity or per capita income as considered in Section 2.2. Or alternatively, that competitiveness has become a catch phrase for factors supporting a sustainable economic development with high living standards. The importance of productivity for competitiveness and livings standards also point to the role of human capital – both its level and its distribution across the population – as a key factor in sustaining a high level and equal distribution of income. The same applies to R&D investments and the possibilities of advancing technologies (see Chapter 4 for further discussion). Clearly social welfare also depends on other factors, and there are trade-offs between material well-being and the environment, distribution, social inclusion and other goals.

While there are fundamental differences between single firms and countries, comparative advantages depend not only on technological factors and endowments, but also on relative prices. Trade, firm location etc. respond to relative prices, so costs matter. Narrower definitions of competitiveness attempt to capture this idea.

One measure is wage competitiveness measuring relative wages or relative unit labour costs, the idea being to assess a key cost component – see Table 1.1 in Chapter 1. Beyond the obvious point that costs also depend on other factors than wages and various measurement problems, this is not an unproblematic measure, since firms adjust factor inputs.[14] Wage competitiveness is nonetheless clearly relevant, and in a fixed exchange rate regime (EMU or unilateral pegs), the development of wage costs relative to productivity is obviously important. Wage competitiveness plays a centre role in economic policy discussion, particularly in small and open economies (see Chapter 1 and Section 2.7). A notable example is Belgium, which has institutionalised this concept in a Competitiveness Law whereby the government can intervene if wage increases exceed a norm defined by the wage growth for its main competitors (France, Germany, and the Netherlands).[15]

[14] In the standard textbook case of a competitive firm producing with a Cobb-Douglas production technology, the wage share is constant – wage deflated by average productivity equals price. Hence, if the wage increases, the firm reduces employment until the value of labour productivity equals the wage. The wage share is unaffected, but employment is lower.

[15] See e.g. https://www.eurofound.europa.eu/publications/report/2009/belgium-wage-formation.

Wages cannot be assessed independently of productivity levels. Wage growth outrunning productivity growth is problematic, but wage growth driven by productivity growth is not. Productivity growth leading to higher wages is the main transmission mechanism through which living standards improve. Wage formation may also affect future productivity via the profitability of investments, and relatively low wages in one period may result in larger future wages. Wages may be misaligned with productivity due to, for instance, excessive wage growth during booms or structural changes affecting production conditions. Notions of competitiveness and flexibility are closely related: a country in which wages flexibly adjust to changes in economic conditions can also more easily remain competitive in the sense of having wages aligned with productivity.

Another key variable is the terms-of-trade; the ratio of export prices to import prices. If a country experiences an increase in the prices of its exports relative to the prices of its imports, this is a potential source of real income gains. However, terms of trade can change for many reasons. Export prices rise relative to import prices if domestic firms innovate and move up the value chain, or if foreign demand for domestic products increases. But such relative price changes may also arise if domestic wages increase excessively, and firms are able to pass on cost increases to their output prices.

Competitiveness is important both in the broad sense of enhancement of productivity and innovation and in the narrower sense of wage and prices adjustments relative to changes in business cycle conditions and structural changes. We return to this in the discussion of specific country experiences below.

2.5 POLITICAL ECONOMY OF ECONOMIC REFORMS

When and where can reforms be expected? What triggers reforms? Why have some countries been able to undertake reforms, while they have been delayed or not implemented in others?

The policy debate is not short of reform proposals. Reform proposals are abundant in the academic literature, as well as in a steady flow of reports from national and international organisations, and think-tanks. Some proposals are politically motivated to shift course, while others are made because existing policies or institutions have to be adjusted to achieve shared political goals in terms of economic well-being and development. A lively debate over such issues is an essential part of democracy, and yet reforms seem to be implemented on a 'too little, too late' basis. Why is this?

Any reform requires a motivation – why is it needed? The agenda is to foster awareness that the status quo is unacceptable or unsustainable. The framing and presentation of facts is crucial, and,

as recent events have demonstrated, facts can be twisted and tweeted in many different ways. While information is flowing freely, people clearly tend to choose media according to their individual views, while all other news are dismissed as biased or fake (see e.g. Glaeser and Sunstein, 2013). The importance of agenda capture, information flows, media etc. is very large, and the process is not strictly rational. Simple solutions to difficult problems may be more popular than more complicated, but ultimately sustainable solutions. Policy action does not necessarily follow, even if experts agree on the problem diagnosis and the reforms needed.

Agenda setting is easier in times of crisis, as dismal performance, a loss of foreign reserves or unsustainable debt levels make it easier to argue that action is needed. But the term 'crisis' is not well-defined. When is a crisis so serious that action is required? Will problems solve themselves or do steps need to be taken? Policymakers resisting change may attribute serious economic problems to bad luck, while others in favour of change may portray current developments as a crisis. Even the term 'reform' is inflated: in political discussions any policy change, small or large, may be denoted a reform to brand it as something making a change for the better.

External factors are also often cited as reasons why reforms are necessary, but the policy reactions can differ. In some cases the outside world is blamed for all problems, and nationalist/populist views gain support. In others, however, it is used as a motivation for reforms, citing the argument that we are in this together and need to cope with change, and manage in a tougher world (see the cases discussed in Section 2.7).

The step to political action is particularly difficult. Established structures and policies may build their own power structure creating a status quo bias. This results in inertia and barriers that need to be overcome for larger reforms to be enacted. It may seem obvious that a reform should follow, if a Pareto improving reform can be identified. Even that, however, is far from clear. To move from an inferior to a superior situation changes along many dimensions are typically required and a coordinated move is thus a precondition. Even if all are well-informed about the gains from the reform, single actors may have insufficient incentives to change course because strong complementarity makes behaviour strongly dependent on what others are doing. This leads to a deadlock with nobody taking the first step. One reason for this is that markets and institutions interact with culture (social norms). Even if all of the stakeholders realise that there is a superior outcome, it may not be individually rational to move in that direction.[16]

The scenario whereby everyone stands to gain is often the exception, rather than the rule. Most changes – including reforms – will have both winners and losers. Often the benefits of a reform unfold over time implying more losers in the short-run and more gainers in the long-run. A standard argument for economic integration is that the gainers can compensate the losers, i.e. there are net gains to society. The extent to which such 'compensation' of the losers takes place depends on labour market structures and welfare arrangements, but it is often incomplete and it cannot be taken for granted. This is the root cause of many problems – both associated with integration, but also in formulating acceptable reforms proposals. Reforms will happen if gains can be spread evenly, or if a strong coalition of gainers has the power to force losses on losers. But often neither happens, because gainers cannot credibly promise compensation and losers have blocking power.

This may constitute a barrier to reform. Voters and policymakers may focus on the short-run effects, and even if policymakers are motivated by the long-run effects, they may find it difficult to convince voters that its benefits can be reaped and will not be 'confiscated' via e.g. future tax increases.

Clearly major economic changes – like economic crises – can change power structures by destroying the status quo situation. This gives rise to the view that major reforms are crisis driven, and a major problem must be present to pave the way for reforms: "Reform naturally becomes an issue only when current policies are perceived to be not working ... that policy reform should follow from crisis is no more surprising than smoke following a fire" (Rodrik, 1996, p. 27).

If a crisis is needed for reform to take place, it gives a rather dismal view of policy formation in democracies. It is not clear that a crisis is either a necessary or a sufficient condition for reform.[17] There are examples of countries where a crisis has not led to significant reforms – as discussed in Section 2.6 on Italy – and there are also examples of wide ranging reforms being implemented without an urgent crisis, e.g. pension reforms in Sweden and Denmark, see below. Many steps in the process of EU integration – like the Single Market – have not been undertaken in a crisis, but to move Europe forward. The EMU can partly be ascribed to the recurrent crises under the preceding fixed exchange rate regime, but also had a clear forward-looking element.

[16] Belloc and Bowles (2017) show how strategic complementarity between contracts and social norms can produce multiple cultural-institutional equilibria. The specific setting is labour market contracts and the interaction between incentives, monitoring, and effort. In this setting there are multiple equilibria (a superior and an inferior outcome). If, in the inferior equilibrium, there is not automatically a move to the superior equilibrium – that requires a coordinated action, and single actors cannot enact such a change. Interestingly, greater international integration makes a shift from the inferior to the superior equilibrium more difficult.

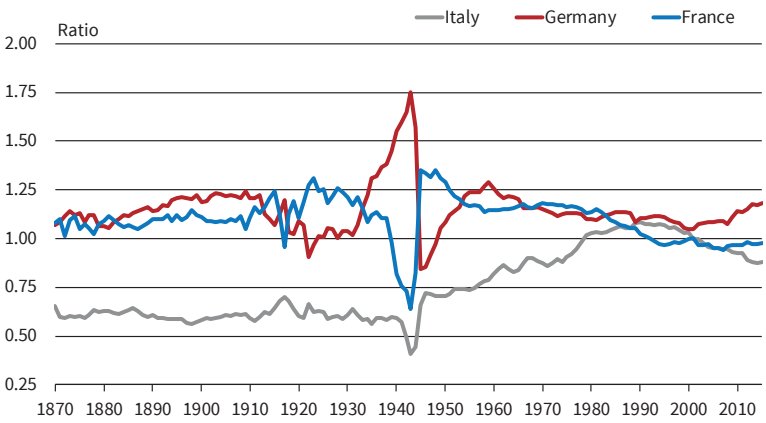
[17] There is a small body of empirical literature on crisis-driven reforms, with Drazen and Easterly (2001), Høj et al. (2007), and Duval et al. (2018) finding that crises lead to reforms, while Agnello (2015) does not. While it is relatively easy to show that major reforms are preceded by a crisis, it is more challenging to explain why crises do not necessarily lead to reform.

External forces may also have ambiguous effects on reform activity and direction. In the run up to the establishment of the EMU it was widely expected that structural reforms would come more or less automatically. Although convergence prior to establishing the EMU was incomplete, it was expected that countries being unable to devalue as a short-term fix of problems, would be forced to undertake structural reforms to make their labour and product markets more flexible. This was referred to as the TINA argument – *There Is No Alternative*.[18] In other words, for euro member countries, the cost of abstaining from reforms was taken to be higher than implementing them, which was expected to act as a trigger. For a more detailed discussion of this issue, see e.g. Bean (1998), Calmfors (1998), Saint-Paul and Bentolila (2000), and Duval and Elmeskov (2005). While it would be wrong to say that there have not been reforms in EMU countries, it is equally clear that the TINA argument has its limitations.

While the literature on political economy offers various explanations of why reforms have either not been undertaken, or were delayed, it has very little to offer in terms of how reform agendas can be promoted. The fact that many reforms are crises-driven does not have obvious normative implications. However, one lesson is the importance of carefully explaining why reforms are needed, and how specific elements can help to solve problems. It is easier to gain political support for broad reform 'packages' designed so that there is no gaping discrepancy between 'winners' and 'losers'.

Figure 2.6

Real Income per Capita: France, Germany, and Italy relative to Western European Average, 1870–2016



Source and Definition: Maddison – 'Real GDP per capita in 2011 US Dollar'. © CESifo

2.6 LAGGING BEHIND – ITALY

To understand how a country can fail to react constructively to the challenges and opportunities of a changing world, consider Italy's 25 years of stagnation and crisis experience.

2.6.1 Where Have All the Miracles Gone?

It is useful to look further back to earlier experiences, and particularly to Italy's strong performance during the glorious period of post-war European economic development. Figure 2.6 plots the real GDP per capita GDP of Italy, France, and Germany relative to the average of all Western European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom). The normalisation hides events that affected the whole of Europe, like wars and technological falling behind or catching-up relative to the United States, and highlights country-specific dynamics (these and other countries fought wars on different sides, and rode Europe-wide growth cycles at different speeds). The data are from the Maddison Project Database (Jolt et al., 2018) and start in 1870, when Italy and Germany had just begun to exist as nation states. They differ from the National Income Account data shown in the figures above, because they measure real production along the cross-country as well as the time dimension; assessing the purchasing power of currencies with "prices that are constant across countries, but depend on the current year."

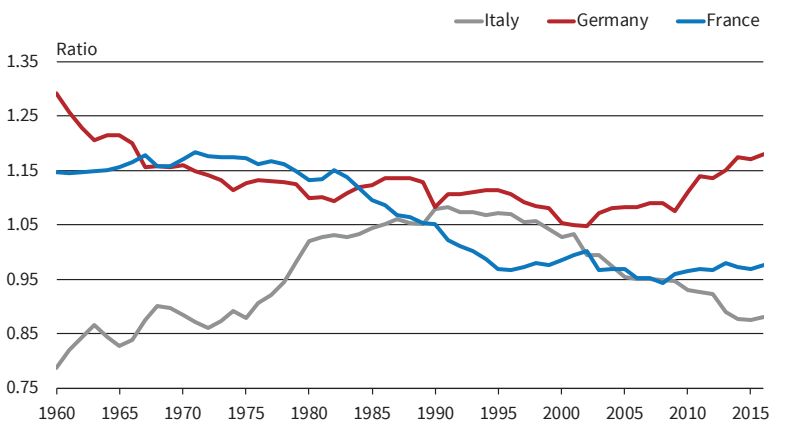
Figure 2.6 shows Italy hovering at around 60 percent of the European average throughout World War I (which it expensively won) and the Depression (which was about as bad in Italy as elsewhere), then crashing to 40 percent after World War II (which it lost). Figure 2.7 focuses on the last 60 years. It shows Italy first shooting from 70 to 105 percent of the European average, outshining both France and Germany, during the post-war period when European countries were broadly converging towards each other and towards the United States. As shown in Figure 2.1 above, both convergence processes ceased in the 1970s and 1980s, when Figure 2.6 shows Italy's relative income still growing strongly, but then sliding back at around the same speed from the early 1990s, and eventually returning to the level of the late 1960s. Through this lens, Italy's economic performance appears as astounding in the post-war period as it has been disappointing over the past 25 years.

Fast post-war growth originated in opportunities for change that Italy exploited effectively: adoption of American technology, urbanisation, and internal

[18] Originally coined by former UK Prime Minister Margaret Thatcher in the mid-1980s to justify her economic policy initiatives.

Figure 2.7

Real Income per Capita: France, Germany, and Italy relative to Western European Average, 1960–2016

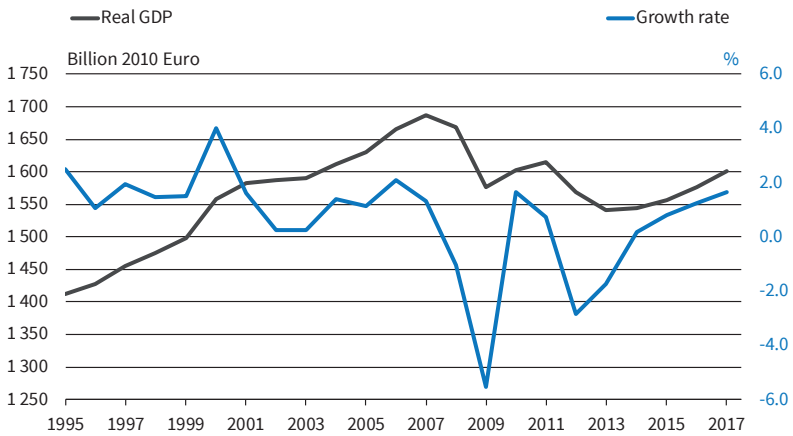


Source and Definition: Maddison , Real GDP per capita in 2011 US Dollar. © CESifo

Figure 2.8

Real GDP in Italy, 1995–2017

Levels and growth rates



Source: AMECO. © CESifo

migration vastly increased the Italian economy's productivity.[19] No such 'miracle' has happened since the 1990s. The striking relative decline of relative per capita GDP in Figure 2.6 starts in the 1990s, accelerates in the 2000s, and continues over the past decade. While both Italy and Europe had to cope with the Great Recession, Italy's slower recovery merely appears to be a continuation of the country's previous poor economic performance. Distinct phases of stagnation and crises are also apparent in the dynamics of Italy's real GDP. As shown in Figure 2.8, this grew very slowly in the 1990s, even more slowly until 2007, and then experienced a series of sharp repeated declines that brought it back down to the level of 2000.

2.6.2 The Mechanics of Stagnation

Figure 2.6 dates Italy's relative income turning point fairly precisely to 1992, a momentous year inside the country and around the world. In Italy, the political hegemony of the Christian Democratic party (Democrazia Christiana, DC) ended in that year. Throughout the post-war period Italy's coalition governments fell and were reappointed frequently, but always included the DC (itself a loose coalition of various interests). In 1992, judicial investigations swept away that political system. Thereafter, electoral competition was between a right-wing alliance of Mr Berlusconi's Forza Italia and smaller parties, and a variable set of centre-left coalition, under the leadership of Mr Prodi in the 1990s and early 2000s.

Around Italy, economic integration shifted into high gear in Europe, with the 1992 Single Market Programme, and globally, as the end of the Cold War fostered trade integration with China and other developing countries. At around the same time the World Wide Web and the first GSM mobile networks were switched on, and information technology began to be broadly adopted. These European and global developments affected all countries, but Italy appears to either have been hit more negatively; or, more interestingly, to have reacted less appropriately.

Italy's malaise starts at the same time as the introduction of the EU's Single Market and the run-up to the adoption of the euro, which is associated with a further acceleration of the country's relative decline. Renouncing the frequent devaluations that played some role in supporting Italy's good economic performance in the 1980s, at a cost in terms of instability for both Italian and foreign producers, may have played some role in the subsequent decades of stagnation. There is evidence that in less developed countries a lower real exchange rate is associated with a medium-term growth acceleration (Rodrik, 2008), which may be explained by institutional or technological improvements triggered by a shift in production out of backward and distorted non-tradable sectors and into export or import-substituting sectors. That evidence is corroborated by Italy's experience, suggesting that

[19] Crafts and Magnani (2013) outline and discuss the various phases of Italy's economic development.

the country may be more similar to developing countries than to its European peers in this respect. However, the correlation is more plausibly generated by mechanisms that link low productivity to overvaluation, rather than by a causal effect from devaluations to higher productivity. In the run up to the euro, Italy did not experience overvaluation, as nationally coordinated indexation to decreasing planned inflation rates restrained nominal wage growth, which persistently turned out to be lower than realised inflation. Loss of wage competitiveness and a smaller tradeable-goods sector may plausibly explain the faster decline after the introduction of the euro, when wage growth resumed (especially in the public and other non-tradable sectors) and to some extent priced Italian employment out of international markets. It is true that after the adoption of the euro, devaluations could no longer realign nominal wages to productivity; but it is hard for nominal rigidities to explain decades of stagnation, so devaluations could hardly be expected to bring it to an end. A more plausible mechanism sees even moderate wage growth outpaced by even slower productivity growth, which can be explained in turn by two conceptually different implications of the country's changed circumstances since the 1990s.

Sources of Structural Change

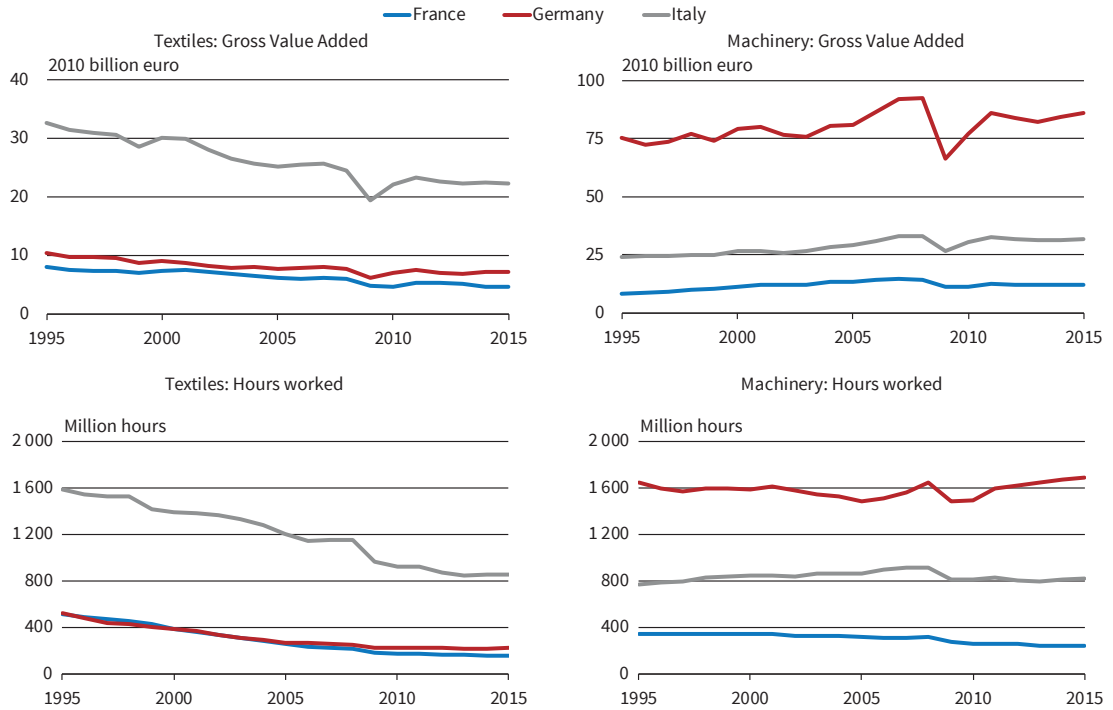
One is the country-specific impact of international economic integration (and technological progress, which has similar implications). Undistorted trade among undistorted economies improves average welfare in each, but has different implications across occupations and factors of production: when markets integrate, those that supply factors that become less scarce suffer income reductions. If Europe as a whole integrates with the global economy, the implications will be different not only for individuals within countries, but also across countries within Europe. There is strong evidence that trade integration with extra-European economies had more favourable implications for the exports and terms of trade of the core economies than for peripheral economies in the European Union (European Commission, 2012, and Chen et al., 2013). Italy as a whole may be relatively worse off thanks to this mechanism. If, for instance, globalisation enables Germany to sell more machinery to China and buy clothing from Vietnam rather than Italy, it benefits the average German more than the average European, and far more than the average Italian.

The structural change that globalisation and technological trends require is not country-specific as such. It affects sectors or occupations, and the regions and cities within countries where the relevant factors of production are more or less abundant. The relative importance of positively or negatively affected sectors at an aggregate level nationally, however, determines the relevance of such change for different countries.

Figure 2.9 shows that in Italy, France, and Germany the production of textiles declined between 1995 and 2015, but not that of machinery, and that employment

Figure 2.9

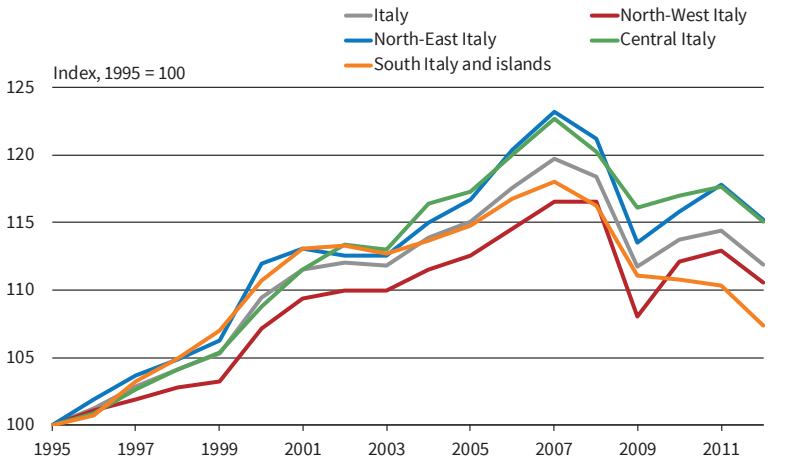
Gross Value Added and Total Hours Worked – Sectoral Developments for Textiles and Machinery in France, Germany, and Italy, 1995–2015



Source: EU Klems Database.

© CESifo

Figure 2.10
Regional Developments in Italy in GDP, 1995–2012



Source: ISTAT. © CESifo

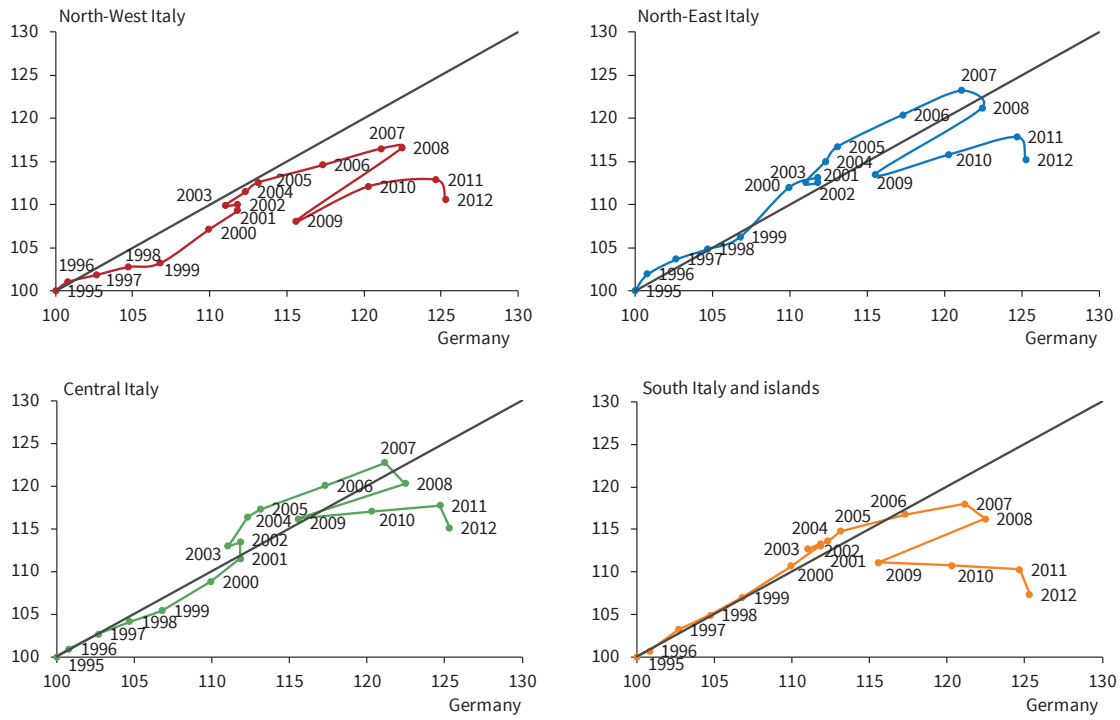
followed similar, but interestingly different paths.[20] These trends and the fluctuations associated with the Great Recession are fairly similar across the three countries, suggesting that sector-specific forces largely explain them. But their relevance at the country level was not the same: in Italy textiles were initially, and remain, far more important than in the other two countries, while machinery (although more important than in France) was, and remains, much less important in Italy than in Germany. Hence, sector-specific developments in the aggregate of the EU-15 countries, all of which traded in a single market for goods and faced similar technological innovations, may partly, but not entirely explain some of Italy's relative decline; not least because, as we proceed to argue, the country was not well equipped to deal with structural change.[21]

Of course, there were sectors and regions in Italy (those most similar to Europe's 'core') that did relatively well. Indeed, Figure 2.10 shows that economic performance was uneven within Italy in ways that partly reflect indigenous political and economic developments, but also arguably relate to European and extra-European economic integration.

[20] Labour productivity in each sector is not the same across countries over time, partly because countries specialise in different segments of the market. For transport equipment the data (not shown) clearly indicate that cars produced in Germany differ from those produced in France and Italy, in ways that appear particularly beneficial over the past two decades.

[21] It is possible to perform standard shift-share growth accounting exercises on broader sets of the EU KLEMS data used in the figure. Our preliminary results suggest that sector structure explains only a small portion of growth differences across Italy, France, and Germany in the 1995–2008 period, when EU-15 external trade patterns changed due to enlargement and globalisation, and in the 2008–2015 period of crisis and recovery.

Figure 2.11
Regional Developments in Italy Compared to Germany, Fixed Prices, 1995–2012



Note: GDP in four marco regions of Italy (*Prodotto Interno Lordo Lato Produzione* at 2005 prizes, normali zed to 1995=100) plotted against time for the available period and against real GDP for the whole of Germany (normalized to 1995 = 100).
Source: ISTAT and AMECO. © CESifo

Interestingly, those parts of Italy that are closer and more similar to Germany did relatively well before the crisis. Between 1995 and 2007 North-East Italy actually outperformed Germany (itself an aggregate of more or less fortunate regions), while not only the South, but also the North-West lagged behind (see Figure 2.11). This suggests that the former benefitted, and the latter were hurt by international market opportunities that allowed some sectors and regions to exploit complementarities and left others facing substitution by competing producers.

For a large and heterogeneous country it can be difficult to adjust to shocks that have different implications across skill types and industries, as well as across geographical units. The impact of globalisation and new technologies has more dramatic implications for income distribution when factor markets are segmented by obstacles to labour and capital mobility, and for welfare distribution in the absence of suitable public transfer schemes and private financial flows.

Institutional Structure

Economic integration was a new development, with both aggregate and distributional implications, that called for suitable reactions. To understand how it resulted in persistent stagnation, we need to identify plausible country-specific sources of disappointing performance. In Italy, markets, policies, and institutions were not up to the task of dealing with change. Labour and financial markets should steer factors of production towards high-productivity firms and sectors, but Calligaris et al. (2016) document that Italy experienced not only an almost uninterrupted decline in average total factor productivity (TFP), but also a very large and steady increase in TFP dispersion across firms. These phenomena are particularly strong in the North-West, where many traditional factories continued to operate long after their workers should have found new jobs. The extent to which factors are misallocated across firms is clearly related to indicators of poor corporate ownership, control, and governance, finance, workforce composition, internationalisation, cronyism and innovation, both before and after adoption of the euro.

Such shortcomings of the Italian economy predate its stagnation, of course, as do other weaknesses like organised crime, corruption, deeply rooted regional heterogeneity, an ineffective legal system, and a somewhat less than constructive political climate which can, in turn, be traced back to cultural factors like the influence of private television and a somewhat dysfunctional educational system. While most of these problems were present throughout previous periods of strong economic performance, and some may have worsened in recent decades (partly as a result of declining and poorly distributed economic welfare), all have plausibly become more damaging in the light of recent developments. Italy's labour force, for example, has always been far less educated than that of other industrialised countries. This did not hinder the country's productivity as long as it was producing traditional manufacturing goods, but became problematic when economic integration and technological developments called for a transition to high-technology production.[22] It would take generations, even in the best of circumstances, to react appropriately to new educational demands. But Italy was slow to even detect the need to change. In these and other respects, Italy needed to adjust more, but proved less capable of doing so than its peer countries.

Sharing the Costs and Benefits of Change

Inside every country, international economic integration does not benefit all equally and is not uniformly beneficial unless gainers compensate losers. Government policies, along with more or less tightly regulated and well-developed factor and product markets, distribute the costs and benefits of change across individuals and firms. Private financial markets could enact the appropriate transfers if it were possible to trade insurance contracts that hedge trade developments. In a world of imperfect financial markets, compensating losers and easing change is, in principle, the task of taxes, transfers, and public education and training programmes.

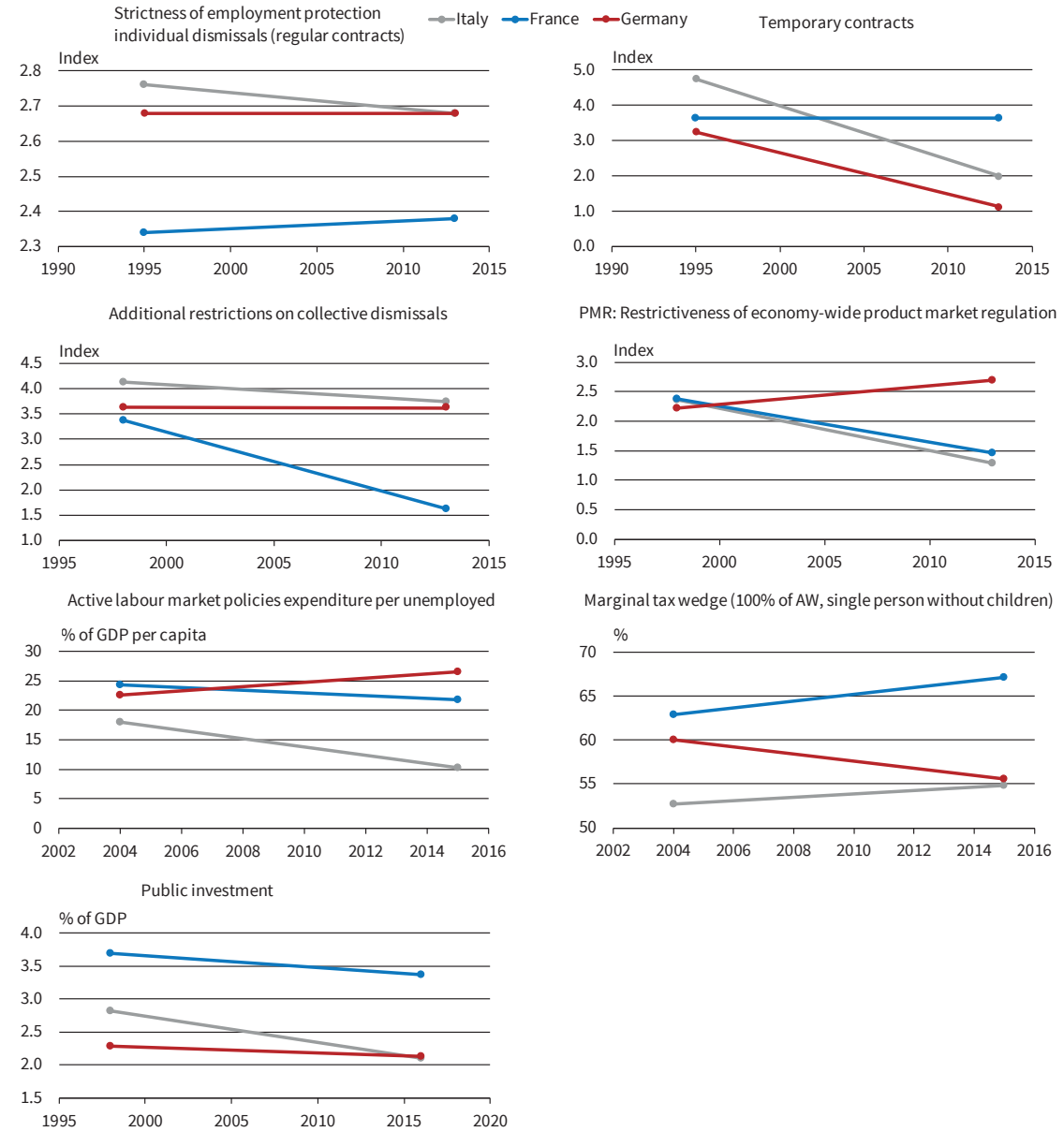
All this is particularly important in cases where international economic integration (inside the European Union with the Single Market and EMU, and outside the Union with globalisation and enlargement) or technological progress have large distributional implications and call for intense reallocation. The economic and policy system that Italy inherited from the 1980s was arguably ill-equipped to deliver the necessary changes. Poor sharing mechanisms are a more relevant problem in a large and regionally heterogeneous country. The decades during which Italy as a whole stagnated were particularly bad for its less developed regions, which compete more closely with developing countries, and saw the rise of the separatist Lega Nord party in the richer (and more similar to European core countries) Northern regions.

An appropriate reaction to external calls for change was also difficult across sectors and more or less dynamic firms. To see whether Italy indeed was less well prepared as its peers to face the new challenges, it is useful to compare its position relative to France and Germany (see Figure 2.12).

In the earlier of the two periods shown (first observation available for each indicator) Italy features a highly centralised wage setting, the most stringent employment protection, restrictive product market

[22] Bertola and Sestito (2013) review and discuss the Italian school system's institutional evolution, and its interaction with the country's production structure.

Figure 2.12
Labour and Product Market Policy Indicators for France, Germany, and Italy



Note: The OECD indicators of employment protection and product market regulationare are synthetic indicators of the strictness of regulation. For each year, indicators refer to regulation in force on the 1st of January. Data range from 0 to 6 with higher scores representing stricter regulation.

Source: OECD Going For Growth database and Employment Protection database.

regulation, and low generosity of unemployment insurance. This policy configuration may have been compatible with some country characteristics. Administrative and information-gathering skills are both relatively scarce in Italy's government and needed to run an efficient unemployment insurance scheme. As better information may well be available within firms, it can be a good idea to mandate employers to insulate labour incomes from productivity shocks. Of course, small firms cannot easily do so and should be exempted from job security provisions (which may partly explain why many Italian firms remain small). Larger firms, burdened by insurance duties, will try and obtain the protection from competitive pressures and entry threats offered by product market regulation. Along Italy's long growth past, and especially after internal migration and urbanisation came to an end in the 1970s, the internal reallocation of permanently employed labour might well have been a good alternative to imposing on workers the risk, mobility, and search costs of adjustment, steered by the unstable wage differentials that centralised wage contracts tend to erase.

If shocks are increasingly sectoral or regional rather than country-specific, a centralised wage setting logically becomes increasingly inappropriate. Moreover, if structural change calls for firm exit and entry, rather than intra-firm reorganisation, unemployment insurance makes more sense than employment protection. And while centralised wage contracts play a useful role when a country

needs to keep aggregate wage growth in check, a rigid salary structure is not what the economy needs in times of labour reallocation across sectors and occupations. These labour market institutions may well need to be reformed to face the structural challenges posed to the country by international economic integration and new technologies, but it would be difficult to blame them for Italy's poor performance relative to its peer countries. Institutions and reforms are not very different in OECD data across Italy, France, and Germany, as shown above.

While there may be more pronounced differences in other countries (such as those discussed in the next section), specific reforms of labour market institutions are just one of the country-specific features that can ease adaptation to structural shocks, by sharing the costs and benefits of change. Job security is not necessarily a bad thing when financial and other markets function poorly. Support for social protection and labour market regulation may well be rooted in the myopic defensive culture that prevents positive growth feedbacks, but it is also motivated by the impact of product and financial market imperfections on the level and volatility of labour income, which for most households accounts for a major share of lifetime resources. To the extent that productivity growth depends on more general institutional features, it may be advisable not to prioritise unpopular labour market deregulation.

The indicators in the Figure 2.12 also show Italy spending less on the active labour market programmes that could retrain workers in times of change, and subsidising research and development to a far lesser extent than its peers. These indicators worsen over time as a result of poor tax collection, slow income growth, and the resulting budget pressures that moved expenditure further away from programmes that promote growth, reallocation, and innovation. Old-age pension spending, despite reforms that promise long-term sustainability, is about 16 percent of GDP in Italy: like the over 4 percent of GDP devoted to public debt interest payment, this is not exactly the kind of public expenditure that can ease reallocation of labour towards more productive sectors and occupations. By contrast, spending on education accounts for just 4 percent of GDP (and is especially low at the tertiary level), and the post-crisis slowdown in public spending was concentrated on capital expenditure, which declined by around 28 percent in nominal terms between 2009 and 2016.[23] For the same reason, tax wedges could not decline as much as they did in Germany (but increased in France).

Other features of the Italian economy at the beginning of its stagnation were less well-suited to ease adjustment than those of other advanced economies. Cumbersome governments and underdeveloped markets are not well equipped to foster change by appropriately sharing its costs and benefits. In Italy firms were, and still are, relatively small, funded by banks and employee's severance pay funds rather than by risk capital. Intergenerational transfers, rather than bank loans, are also common for house purchases. Hence, shallow markets and poorly-developed public policies arguably made it particularly difficult for Italy to face globalisation and technological innovation.

The most recent regulation indicators, however, are not so bad. Italy did reform its labour market around 2000, introducing similar flexible and low-tax contractual arrangements to those of the Hartz reforms (see below) in Germany (Bertola and Garibaldi (2006) review these and earlier labour market policies and outcomes). There was no need to reduce unemployment insurance, which was very generous in Germany, but not in Italy where it was recently – and appropriately considering the above arguments – extended and made more generous. The OECD indicators find that product markets were deregulated in Italy more than in France, while Germany regulated more tightly (it also reduced public investment and R&D subsidies). Product and service market deregulation was particularly strong and visible during the 2011 crisis when the Monti government abolished licenses for small and medium shops, and removed all constraints on opening hours.

2.6.3 Complacency on a Cliff Edge

Italy did reform, but perhaps not as fast as other countries, and certainly not at a pace that would let it swim against negative shocks and keep up with its peers. This is not because change is ruled out a priori. Political parties do routinely promise reforms, and some do follow through when they win elections. Sparse and hesitant reforms and frequent government turnover, however, do signal that there is no stable consensus about which reforms should be enacted, and that the policy status quo has considerable political support.

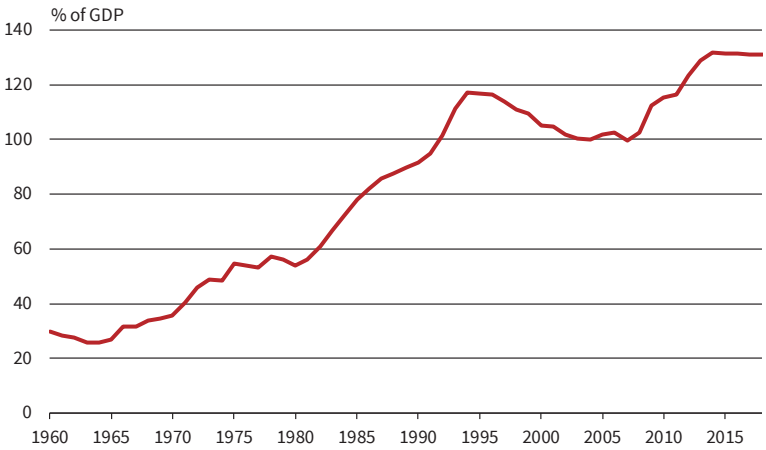
It is not difficult to understand why. As discussed above, a crisis is often needed to trigger reforms, but good past performance in living memory can reduce the urgency of reforms. Many Italians remember better times, and wonder whether just waiting for them to come back is the best strategy: after all, everything was going so well just a while ago, and past growth lets the standard of living remain high. President Berlusconi expressed this feeling well when at the November 2011 G20 in Cannes he wondered how everybody could be so worried about an Italian crisis even as the country's "restaurants are full." Reforms can be perceived to be adding risk to an already complicated situation (a feeling well expressed by the 19th century British politician who said: "reform, reform, reform: aren't things bad enough already?"). A complacent

[23] These and other data are documented and discussed by Andrle et al. (2018).

'no need to change' attitude is understandable for a rich country, where a majority is content to enjoy a high standard of living.

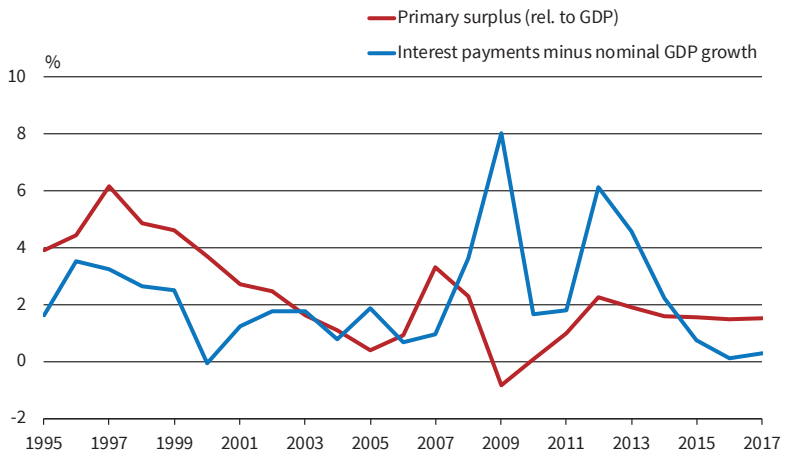
The lack of reliable growth prospects is problematic, however, for a country that is integrated with a changing world (and draws from this integration a large share of its economic well-being). To see why, consider the financial perils of stagnation and crisis. Figure 2.13 shows that Italy's debt/GDP ratio rose sharply in the 1980s, and declined in the 1990s only to begin growing again sharply in the mid-2000s. Figure 2.14 shows the factors driving its dynamics during the country's stagnation and crisis: mathematically, for the debt/GDP ratio to decline the government's primary surplus (excluding interest payments) should be a larger proportion of GDP than interest payments, net of the denominator's growth. It is hard to reduce the debt/GDP ratio if its denominator does not grow and fears of default increase interest payments in the numerator. In other words, stagnation and fiscal unreliability put debt on a cliff edge that would make the country fall towards North Africa or Latin America.

Figure 2.13
Public Debt in Italy, 1960–2018



Source: European Central Bank. © CESifo

Figure 2.14
Primary Budget Surplus and Growth – Corrected Rate of Return of Italy, 1995–2017



Source: European Central Bank. © CESifo

Hard does not mean impossible: what is needed to ward off the vicious circle of a ballooning debt/GDP ratio is a large primary surplus, such as that shown in Figure 2.14 for Italy in the late 1990s, when the country successfully strived for euro membership under a Prodi government. The debt/GDP ratio continued to decline for a few years, thanks to lower interest payments, if no longer to large primary surpluses. The vicious circle and the edge of the cliff loomed large once again when the crisis-related deficits triggered fears of default and/or redenomination, and increased interest rates. Primary surpluses have been remarkably large in recent years, especially relative to the shrinking GDP that is a common feature across all of Italy during the debt crisis (see Figure 2.10), when difficult financial conditions and a widespread lack of faith in the country's future reduced investment and consumption across the board. A commitment to fiscal austerity (as enacted in the '6-pack' context) can, in principle, restore credibility and growth, but will not do so in a country where many think it is unwise, ineffective, and unpopular. Italy's fiscal policy is characterised by much the same hesitant and partial character as the country's response to structural challenges. It suffers in particular from weak tax enforcement and frequent tax amnesties, which constitute a myopic and ineffective way of increasing the state's tax receipts.

2.6.4 And Now What?

Coping with change is difficult indeed. History offers many other examples of rich countries' decline and stagnation, which can be interpreted along the same lines as Italy's experience: "In Venice in the 1600s or Amsterdam in the 1700s, members of rich societies turned efforts away from innovation and competition and towards the defence of small or large privileges. Particular interests loom large in a stagnating economy, where redistributive coalitions' veto power

makes it increasingly difficult to innovate and grow. It is up to political interactions to find a way to break this vicious circle."[24]

During the crisis, the Monti government enacted some emergency reforms, and notably reduced pension rights. As the Italian economy finally ceased to shrink and shiver, centre-left governments enacted some other reforms. A particularly relevant one, known in Italy as the 'Jobs Act' and introduced in 2015, made unemployment insurance more generous and introduced a single standard employment contract, with a pre-set scale of tenure-based redundancy payments, meant to replace both the existing standard contracts with stronger job security provisions, and the many non-standard contracts liberalised by earlier reforms around 2000. In 2016 a very substantial set of institutional reforms was also submitted to a constitutional referendum which, along with a proposed change of electoral law, would have streamlined political decision-making processes.

Both the political feasibility and the practical success of these reforms hinged on a hopefully self-sustaining wave of optimism and forward-looking orientation. More specifically, the flexibility-oriented labour reform could have made a favourable impression on the electorate if it had boosted hiring in a strong economic upswing. Growth did not come soon enough, however. Even as Italy began to grow modestly, the referendum failed, the government fell, and a caretaker government could only add some modest amounts of additional flexibility (with good payoffs in times of somewhat stronger growth, driven by exports boosted in turn by the ECB's quantitative easing and by US fiscal policy).

The 2018 vote, shaped by strong populist sentiment, brought to power a coalition of two odd bedfellows. One is the Cinque Stelle movement, which gathers its consensus from the economic discontent of youth and residents of poorer regions. The other is the Lega party which, while remaining rooted in higher-income (if low-education) social strata and regions, changed its electoral platform to ride a wave of resentment against budget constraints and immigration by adopting a nationalistic anti-European and anti-globalisation stance. The coalition dubs itself a 'government of change' (*del cambiamento*), an appropriate stance if a lack of constructive change is what kept Italy's economy in stagnation. Change for change's sake, however, does not necessarily go in the right direction. If what is needed to cope with change is suitable sharing of adjustment gains and losses, the winning parties' platforms can be more dangerous than inaction, because they are largely incompatible and uninclined to compromise. The Northern employed supporters of Lega would like lower taxes, smaller government, and earlier retirement. The younger, less employed, and Southern supporters of Cinque Stelle would like minimum income guarantees, and more public employment.

Both electorates share a nationalistic attitude to economic integration and broad individualistic opposition to regulation (such as mandatory vaccination). In practice, the first economic policy actually enacted (in summer 2018) was a regulation-oriented retraction of labour reforms by previous governments, with higher firing costs and more restrictive temporary employment rules. Reforms that increase labour market rigidity may appear to be a costless remedy to workers' malcontent when resources are scarce; but while labour market rigidity does not increase the numerator of debt/GDP ratios directly, it decreases their denominator by reducing efficiency. Furthermore, more rigidity is as misguided in times of expansion, when it reduces firms' propensity to hire, as deregulation can be in economic downturns, when it pushes employment and wages without a large payoff in terms of employment creation.

Other proposals on the table include the renationalisation of toll highways and of the flagship airline, a reinstatement of earlier retirement ages and accelerated replacement hiring in the public sector, delayed liberalisation of energy markets, and even restrictions on shop opening hours. Many of these reforms reverse previous reforms. This brings back to the Italian economy institutional features that played a role in preventing suitable reactions to structural change and resulted in its prolonged stagnation. The budget for 2019 includes lower tax rates and a minimum income guarantee, that was originally (but is no longer) partly financed by a tax amnesty, and defies EU rules by envisioning a large deficit and paying only lip service to public debt reduction.

Unrealistic promises and reform reversals make it impossible to foster the credibility and investments that the economy needs to cope with structural change. As has all too often been the case over the past 25 years, policy actions in Italy appear to be nostalgically inspired by a wish to return to a past that looks good in living memory. It can be irrationally appealing to restore policies that were in force in better times, but old-fashioned policies alone would not bring back 1960s growth. Memory is selective. It is only too easy to forget the negative aspects of past experience and mistakenly remember both having cakes and eating them. Italy's post-war growth was not really a miracle: it called upon the country to address the thorny problems posed by urbanisation, internal migration, and hard factory work. Those who remember fondly the national currency forget the damage done (not least to pensioners) by high and unstable inflation, and fail to recognise that the public deficits of the past that are so fondly remembered

[24] This is a loose translation of an excerpt from Mario Draghi's introductory speech, available in Italian at https://www.bancaditalia.it/pubblicazioni/interventi-governatore/integov2011/draghi-121011.pdf, at a conference on the first 150 years of Italy's economic growth (proceedings in Toniolo, 2013).

left a heritage of huge debt. Even though the cliff still looms large, the temptation remains strong to try and break out of unpopular constraints by increasing public deficits (see Chapter 3 of this report). But Italians can and do draw sobering conclusions from observing crises in Argentina, Turkey, and Venezuela, which are all countries that do not have to abide by European Union and Euro Area policy constraints, but aren't doing so well.

2.7 OTHER COUNTRY AND REFORM EXPERIENCES

All EU-15 countries – and OECD countries for that matter – have experienced periods of good and bad economic performance. Policy debates tend to elevate specific countries as 'best performers' or 'superstars' setting an example for others to follow. At different points in time Germany, Sweden, the Netherlands, Japan, and Denmark have been the darlings in the debate, but it is telling that no country has persistently been a model example. This highlights the fact that economic performance varies over time depending on a long list of global and domestic factors.

However, some countries stand out in terms of a trend towards deteriorating economic performance, like Italy, as discussed above, and France. There are plenty of bad examples. In an era of great scepticism over the effects of economic reforms, it is worth pointing out that there are notable examples of countries that via reforms – some implemented in a deep crisis and others in less severe situations – have improved their economic performance.

It is impossible to cover the reform experiences of all EU countries in detail – even for the EU-15 countries – but we offer a brief summary of selected experiences below. The purpose is to highlight a few key aspects in terms of the timing and content of reforms. This is done on a case-by-case basis to highlight interesting and important issues in relation to economic reforms. Clearly, numerous issues related to causality, the precise effects of reforms etc. are not addressed.

In the following we begin with a short account of reform experiences in Denmark, the Netherlands, and Sweden. These countries share a path of deteriorating economic performance initially, followed by an improvement, and form interesting contrasts to the developments in Italy. This comparison highlights both why shocks may have different country effects, as well as the importance of reforms. What happened that was bad for (parts of) Italy around 1992 appears to have had other effects for these countries: for example, trade with China was a positive development for the Netherlands, a trading country with the largest European port. These countries, however, also enacted reforms, and were able to take advantages of new opportunities.

Finland is an interesting case since it has been on a catch-up trajectory, but has been also exposed to severe shocks along the road. Finally, we consider Germany as an example of a large country undertaking significant economic reforms. There also other examples like Ireland (especially during the 1980s) and Spain (especially after the crisis) that have made significant improvements in economic performance, but are not covered here due to considerations of space.

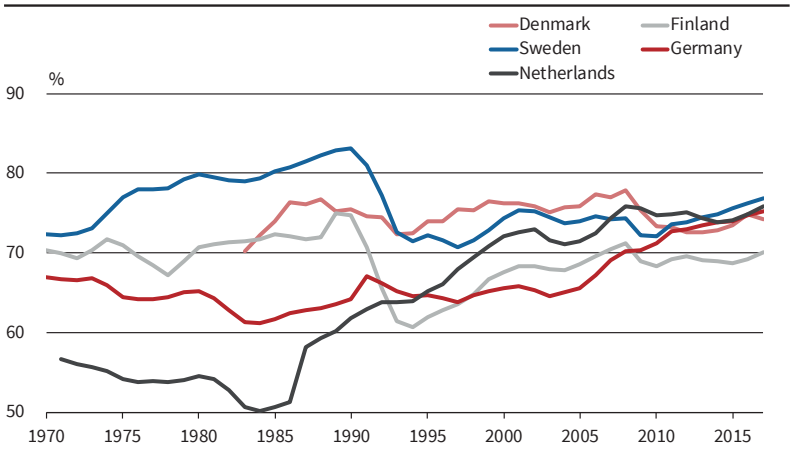
2.7.1 Three Reform Cases – Denmark, the Netherlands, and Sweden

The sharpest contrast to the developments in Italy is seen in Denmark, the Netherlands, and Sweden, as illustrated in Figure 2.2. These three countries experienced a relative similar development with a decline in relative economic performance until the early part of the 1990s, and then managed to break this trend via reforms and regain a position among the best performers within the EU-15 group.

Obviously, these three countries share some characteristics, including the fact that they are small and open economies, they have a long tradition of corporatist[25]/consensus solutions, and have relatively large public sectors. But there are also important differences. Public sector structures and designs are rather different[26], and while the Netherlands is a euro-

[25] In these countries, 85 percent or more of the employed are covered by collective agreements and sector level bargaining, with a high degree of bargaining coordination (Visser, 2016).
[26] As an important example, pensions systems are very different based on a notional defined contribution scheme in Sweden, a largely funded contributions scheme in Denmark and defined benefit scheme in the Netherlands.

Figure 2.15
Employment Rates in Denmark, Finland, Sweden, the Netherlands, and Germany, 1970–2017



Source: OECD.

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country, Denmark pegs the exchange rate to the euro, and Sweden pursues a flexible exchange rate regime (with inflation targeting). While the specific reform details are country-specific, they share a focus on the need to restore competitiveness – and more broadly strengthen the private sector.

The dismal developments leading to the reforms were also widely recognised and were probably an important factor in creating a consensus-based understanding of the need for reforms. The challenge of needing to remain competitive was seen as a collective problem – "we are in the same boat" – requiring action. The reform trigger is most visible in the case of Sweden's boom-bust pattern, but crisis sentiment was also present in the two other countries. We comment briefly on the reform experiences in these three countries, focusing on reforms related to the developments in the 1990s (see Figure 2.2).

Denmark – The Flexicurity Model

Economic developments in Denmark deteriorated during the 1970s and 1980s, with systematic trade and deficits and persistent high unemployment prevailing. The mood in the late 1980s and early 1990s was pessimistic and there was a widespread perception that "we have to learn to live with high unemployment."

In this spirit a new (1993) Social Democratic-Liberal coalition government launched a 'work sharing' scheme, but policies soon shifted direction. The social safety net was changed from having a passive focus on income maintenance to a more active focus on bringing the unemployed into employment. This happened in a sequence of reforms. The fall seen in unemployment – partly driven by business cycle developments – created a political momentum for further reforms (Andersen and Svarer, 2007). The key elements in these reforms were: i) a shortening of the benefit period for unemployment benefits, ii) eligibility for unemployment benefits no longer to be re-gained by participation in activation programmes, and iii) implementation of activation requirements (workfare) both in the unemployment insurance scheme and in the social assistance scheme.

During the 1990s Denmark changed from a high to a low unemployment country; a development associated with the so-called flexicurity model. Employment rates increased (see Figure 2.15). The reforms can be said to have established a balance between flexible hiring/firing rules, a relatively generous social safety net, and an active focus on bringing the unemployed back into work – known as the flexicurity model. Tighter eligibility conditions for unemployment benefits and social assistance, as well as an active labour market policy, were important drivers of this change.

A number of other factors contributed to the improvement in Denmark's economic performance. Back in the early 1980s, a political commitment was made to a pegged exchange rate, and the requisite discipline to give this policy credibility was established. Wage formation also changed. The social partners made a commitment in the "common declaration" of 1987 to ensure wage developments consistent with maintaining competitiveness for the Danish economy. Wage developments over this period were moderate, despite the falling unemployment rate. Finally, the reforms in the 1990s that had a supply-side orientation were accompanied by expansionary domestic demand. Fiscal policy was expansionary, partly due to a tax reform with tax reductions being phased in prior to tax increases. The reform direction was to broaden tax bases and reduce marginal tax rates. Moreover, capital market liberalisation fuelled a booming housing market and rising domestic demand.

In retrospect, the reforms followed a two-handed approach with structural policies accompanied by expansionary fiscal policies, implying that the structural policy changes more quickly translated into employment and therefore became broadly accepted. The Danish experience over this period was mainly a result of a trial-and-error process, rather than the outcome of a grand master plan. The turn in the country's economic development, and particularly the drop in its unemployment rate, created the political momentum for further reform steps.

A second reform wave was prompted by a concern for fiscal sustainability due to an ageing population. In 2006 and 2011 key steps were taken to increase retirement ages and index them to developments in longevity (see EEAG, 2016). Subsequent reforms of all elements in the social safety net aimed at further strengthening the labour supply and employment. As a result, fiscal policies are sustainable despite an ageing population.

Denmark was hit relatively hard by the financial crisis, partly because the economy was already showing signs of contraction after a boom with growing domestic demand and high wage increases. Its recovery has been relatively slow, but unemployment has remained comparatively low. Most unemployment spells are short and structural unemployment has not increased, and in that sense the flexicurity model has weathered a significant downturn (see EEAG, 2016). The economy has thus been relative resilient, and key macro indicators have been favourable in recent years.

The Netherlands – From 'Dutch Disease' to a 'Dutch Miracle'

During the 1970s and the early 1980s, the Dutch economy performed worse than most other European countries, and the Netherlands entered an economic slump in the early 1980s. This was partly attributed to the so-called 'Dutch Disease' arising from gas

exploration, an overheating economy and a declining manufacturing sector. In the early 1980s, employment rates were low, and an increasing number of people were on disability pension.

This situation led to a radical shift in economic policy in the early 1980s, with a focus on structural policies, fiscal consolidation, and efforts to strengthen the credibility of the fixed exchange rate policy (OECD, 1998).

The so-called Wassenaar Agreement reached in autumn 1982 marked a crucial turning point. An agreement between employer's organisations and trade unions led to wage restraints to improve wage competitiveness. This was accompanied by shorter working hours based on the idea that available work should be distributed more equally across the work force. The need for a small and open economy to stay competitive was a main driver behind this agreement.

The Wassenaar Agreement is a hallmark of the so-called Polder model with tripartite cooperation between unions, employers, and the government institutionalised in the Social-Economic Council. The council discusses labour market and social issues, and there is a tradition of reaching consensus to avoid conflicts and strikes.

The social safety net was also reformed in the early 1990s. The high and increasing number of disability pensioners led to stricter requirements for disability pensions and sickness pay. The unemployment insurance scheme was made less generous, and there was a greater focus on labour market policies targeting weak groups and more opportunities for temporary employment.

In the wake of these changes the economic development changed and employment rates increased significantly (see Figure 2.15). However, a significant factor behind rising employment was an increase in part-time jobs. The Netherlands has a high employment rate, but also a comparatively high share of part-time workers – a feature that also characterises the Netherlands today.

More recently, the Polder model has been weakened due to stronger prevalence of 'atypical' jobs, the declining power of unions, as well as political changes (see Afonso, 2017). As an example, an agreement concluded in 2013 between the social partners included an increase in the maximum unemployment benefit period from 24 months to 38 months, representing the roll-back of an earlier reform reducing the duration of this period from 38 months to 24 months. Employers initially resisted the implementation of this agreement, but eventually accepted it (see European Commission, 2017). Moreover, collective agreements have been concluded in recent years without the consent of the largest unions. The incidence of strikes has also risen, but from a low level.

The Netherlands experienced a growth decrease as a result of the financial crisis that was on a par with most European countries. Its recovery has been slow (see Figure 2.2) and its performance has been relatively poor compared to that of countries like Denmark and Sweden.

Sweden – The Rise, Fall, and Rise Again of the Swedish Model

The Swedish model was hailed as highly successful throughout the 1960s and 1970s. Income levels were high, inequality low, and the welfare state extended. However, there were already signs of underlying problems and growth was fading (see Figure 2.2). The future looked bleak and the discussion turned pessimistic, with references to "the rise and fall of the Swedish model" (Lundberg, 1985).

Sweden experienced a boom-bust pattern in the late 1980s and early 1990s. The late 1980s saw a boom, partly driven by capital market liberalisation and a booming real estate market. As a result, wage increases were high and wage competitiveness deteriorated. A major crisis hit Sweden in the early 1990s, partly due to the 'Soviet shock' and the crisis in Finland. Between 1990 and 1993 unemployment increased from 2.3 percent to 10.1 percent, and the public balance went from a surplus of 4.1 percent to a deficit of 11.2 percent of GDP (debt peaked at 83 percent of GDP in 1998). A banking crisis evolved. At the time, Sweden pursued a fixed exchange rate and in the fall 1992 the Central Bank raised the steering rate to 500 percent in an effort to prevent capital outflows. This policy was abandoned in autumn 1992, and a floating exchange rate regime was adopted.

A number of reforms were implemented in the early 1990s. A key element was a fiscal consolidation package involving both expenditure cuts and tax increases to ensure budget surpluses and debt reductions. Top-down budgeting with surplus targeting and expenditure ceilings was introduced. Initially these measures were considered crisis management tools, but they eventually developed into a fiscal policy framework with well-defined intermediate targets for the management of public finances (since 1997), which was later strengthened by the establishment of a fiscal policy council in 2007 (see Calmfors, 2012, and Andersen, 2013). The Swedish fiscal framework became a model example for later developments in other countries and the European Union.

The monetary regime was changed, the central bank became independent and set inflation targets. A banking reform included government take-overs with no bailing out of previous owners. There were privatisations of public utilities like rail, telecom, taxis, schools, the postal service, and electricity. Wage setting changed in the direction of so-called pattern bargaining, with export sectors becoming leaders in the wage setting process. The wide ranging nature of the reforms is also demonstrated by an increase from

three to four years between parliamentary elections as a means of ensuring greater political stability. The reforms shifted the course of Sweden's economic development, but although employment has been increasing, it has not yet returned to the levels seen in the early 1990s (see Figure 2.15).

This period also saw a major tax reform – 'the tax reform of the century' – broadening tax bases and reducing marginal tax rates (top marginal tax rate from 90 percent to 50 percent and corporate taxation was lowered), and a pension reform launching the notional defined contribution scheme (see e.g. Palmer, 2000). Both of these reforms were made before the onset of the crisis, reflecting both the need for reforms perceived before the onset of the deep crisis, as well as forward looking elements in policy making.

This comprehensive reform agenda was visibly crisis driven. 'Crisis' awareness made it clear that reforms were needed. The reforms were the outcome of broad political compromises (between social democrats and liberals). This was important not only for their implementation, but also for the credibility of the reforms, and the main elements have remained intact, despite subsequent changes in governments. It is also interesting that inputs from experts were important for the formulation of reform strategies, most notably the so-called 'Lindbeck Commission', which was appointed in autumn 1992, and presented its recommendations in spring 1993 (Lindbeck et al., 1994). Similarly, a high level of general trust in policymakers and the government facilitated the acceptance of the proposed solutions. In addition, the reform package was comprehensive, implying that a given household could be a winner and a loser from different elements of the overall package. This made it harder to mobilise opposition to the reforms (see Hassler, 2015).

Overall economic performance has since been favourable. The effects of the financial crisis for Sweden were relatively mild, partly due to its export structure and partly due to fiscal space allowing counter-cyclical measures.

2.7.2 Finland – Shocks and Resilience

Finland is probably the EU country which has been the most adversely affected by severe negative shocks in recent times, and yet it is has shown resilience (see Figures 2.2 and 2.15).

Finland experienced rising income levels on a catch-up trend up to the 1990s. This changed abruptly in the early 1990s into a boom-bust pattern. GDP in Finland fell by 13 percent and unemployment increased from three percent to 16 percent from 1990 to 1993. The fall of the Soviet Union in 1991 meant that Finland experienced a collapse of a significant export market (Korkman and Suvanto, 2015). The erosion of wage competitiveness during the boom years contributed to a worsening of the crisis, which had widespread implications, including a banking crisis.

In response, a number of reforms were implemented, including tax reforms broadening tax bases and lowering marginal tax rates. Wage setting in Finland is based on a tripartite system featuring extensive cooperation between social partners and the government in terms of wages and working life conditions, but also with regard to social and tax policies (Asplund, 2017). In response to the crisis, wage restraints were agreed. The currency lost about one third of its value at the onset of the crisis. This devaluation and wage restraint helped to improve Finland's competitiveness, and its recovery from the crisis was mainly export-led.

The Finnish export structure is fairly specialised. Finland's comparative advantage has historically been in primary sectors (wood/paper), but alongside this a knowledge-intensive specialisation in ICT developed during the 1990s and into the 2000s. Investments in R&D expanded rapidly, and included substantial public involvement (public funding of R&D constituted about four percent of total government outlays in the mid-2000s). Finland is an interesting example of how a country can affect technology developments via targeted policy measures, and thus shape the structure of its economy (see Chapter 4). Moreover, the Finnish educational system has consistently ranked among the best in the PISA assessment of learning outcomes.

Difficulties in both the paper and ICT industry (the Nokia crisis) coincided with the onset of the financial crisis, which has been deep and prolonged.

A new broad coalition – the Rainbow cabinet – government took office in 2005. In response to the financial crisis, fiscal policy turned expansionary and included tax cuts, job-training programmes for the young, and support for housing and infrastructure. There were also measures to facilitate export financing and support for financial institutions. Subsequent concerns over fiscal consolidation have taken on a more prominent role, but public finances remain strained.

The political situation is currently more uncertain than previously. Few policy initiatives have been undertaken in recent years, although income policies have been revived in the form of a 'competitiveness package'. The most notable recent reforms are spending cuts on, for example, higher education and R&D, which in the short-run contribute to fiscal consolidation, but have detrimental effects on productivity and long-run growth (see Finnish Economic Policy Council, 2017).

2.7.3 Germany

Germany, for many years Europe's leading economy, experienced economic difficulties after unification. Per capita income was declining (see Figure 2.4) and

Germany became "the sick man of Europe" (Sinn, 2003). Recently, however, it has experienced a remarkable improvement, and has regained a position among the high-income countries in Europe.

Important policy changes took place during 2003-2005 with a sequence of reforms – the Hartz reforms. They included a cut in unemployment benefits for the long-term unemployed, as well as active labour market policies and subsidised employment. Job creation was supported by so-called mini-jobs, made possible by the removal of working hour restrictions. Improved possibilities for firms to use 'leased' temporary workers as well as in-work benefits to top up low earnings were also important elements. The reforms strengthened the economic incentives to be in work and affected wage bargaining, leading to wage moderation, which, in turn, improved wage competitiveness. These improvements also benefitted from the export structure of the German economy.

In the wake of these reforms, employment has been growing (see Figure 2.15), although there has also been widening wage and income inequality (see OECD, 2012, and Dustmann et al., 2014). Burda (2016) attributes the largest reform effects to the labour supply effects and wage bargaining, but the structure of labour demand also played a role. Dustmann et al. (2014) argue that the most important changes were made to the governance structure determining relations and mutual agreements between the three main labour market parties: trade unions, employer associations, and work councils (the worker representatives who are typically present in medium-sized and large companies). This allowed wage-setting decentralisation to secure jobs in Germany.

For Germany, the financial crisis was less negative and less persistent than for less manufacturing- and export-oriented economies. Increased working time flexibility at the firm level in the form of *Kurzarbeit* (the short working week) also played a role. This system allows firms facing a temporary crisis to reduce working hours below normal and claim compensation from the government. In response to the crisis, the generosity of and eligibility for this system were extended, and at its peak on average 3 percent of employees were on short working weeks. According to estimates by Hijzen and Venn (2011), around 235,000 jobs (equivalent to 0.6 percent of employment) were saved due to this system.

Germany proved able to withstand the crisis well thanks to temporary layoff programmes and a strong manufacturing export orientation. Under other circumstances, both could have been a liability. In the crisis as it materialised, they made it possible for the country to limit employment losses and allowed its durable machinery exports to grow fast as emerging countries returned to growth after the crisis (and the euro remained weak against the US dollar and especially against the Japanese yen).

In sum, the country cases considered above reveal that country successes and failures vary over time depending on both internal and external factors. One common theme across all the cases considered is efforts to improve competitiveness by aligning wage formation to productivity developments and strengthening both the incentive structure and job search support. There has been sufficient political capital to ensure broad, though not unanimous, support for the reforms. In all cases, the reforms are outcomes of a process and not a one-off effort, and visible improvements in economic performance have in many cases been essential in maintaining support for the reform agenda.

2.8 CONCLUSION

The EU's 'ever-closer-union' trajectory no longer seems realistic. Economic developments differ across member countries, and dissatisfaction with the European Union is growing while populist and nationalistic policies are gaining ground.

It is too simple to blame the EU's economic integration process for the dismal economic performance of some countries and a lack of overall convergence. A country's performance over a given period of time can reflect shocks, which often originate outside the European Union, and in particular in the EU's integration with the rest of the world, combined with country-specific policies and institutions that make it easier or more difficult to adjust to shocks. There are thus many reasons why country performances may differ, and why some countries may perform better in some periods, and worse in others. However, there are differences across countries, particularly in terms of the ability to undertake requisite reforms on a timely basis.

To understand the mechanisms that underlie country-specific performance, this chapter focuses on structural change and reform patterns across the EU-15 countries, due to the particularly striking lack of convergence across these countries after decades of integration , and studies some of their experiences in detail. There is much to learn from Italy and its difficulties in turning economic developments, but it is not the only country to experience increasingly turbulent politics and persistent productivity slowdowns. There are also lessons to be learned from the reform experiences of countries that managed to break out of relative decline like Denmark, the Netherlands, Sweden, Finland, and Germany.

These cases show that luck matters, but reforms do make a difference. When shocks hit, many economic, political and institutional factors play a role in determining whether reforms are undertaken or not. The country differences observed in economic performance have many causes, of which economic integration is just one. The European integration process is both a response to various crises in

the past and an opportunity to capitalise on new opportunities, which need to be exploited by reforms that manage and spread appropriately the costs and benefits of change.

Reforms are not a one-off effort – future changes may call for new responses, and there is no simple blueprint to be followed. It is too easy not only to disregard the drawbacks of reverting to the past status quo, but also of contemplating simplistic potential solutions. It is important to face reality and react constructively to the policy options available. The wealth of nations depends on circumstances beyond their control, and on their policy reactions to them. It is essential to adopt the right policies in the light of specific sets of circumstances; and not fashionable policies regardless, or policies that were in force in better times. Some countries' political processes are naturally more cohesive and pragmatic, others have to work on it, but all should be aware that finding ways to share gains and losses will help them to avoid stalemates and adapt to change.

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Struggling with Constraints

3.1 THE CURRENT EMU IS INCOMPLETE AND UNSTABLE

Chapter 2 documents a significant dispersion in the performance of EU economies in the past couple of decades. In part, the performance differential is the result of shocks originating outside of the European Union. Namely, while some industries (and countries that specialise in them) benefited from the advent of East Asian and formerly communist-ruled Eastern European economies, other industries (and countries) suffered from the same process. In addition, countries respond to shocks using different policies, equipped with different institutional setups and having differing levels of ability to undertake necessary reforms in a timely fashion. Many economic, political and institutional factors play a role in determining whether reforms are undertaken or not.

Thus, the differences observed in economic performance are not a result of economic integration per se. In fact, the European integration process is both a response to various crises in the past and an opportunity to gain from new opportunities. On the other hand, being part of the European Union imposes certain constraints on member states. These constraints are even tighter for countries that have adopted the euro as a common currency. While this provides them with additional opportunities, the incomplete nature of the Economic and Monetary Union (EMU) also imposes serious constraints on countries facing asymmetric shocks, making it difficult for them to stimulate their economies and regain growth. In this chapter we discuss these constraints and consider ways in which EMU member states can potentially deal with them, cooperatively or otherwise.

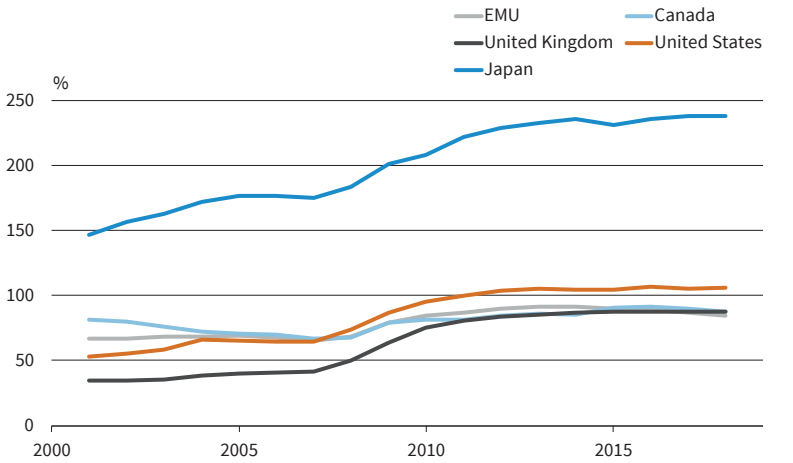
In addition to the Schengen Treaty, the creation of the common European currency, the euro, is one of the main symbols of the European integration process. The common currency helps facilitate movement of goods, people and businesses, and creates a common unit of account and common store of value across countries of the monetary union. The euro is also the principal store of value in regions adjacent to the eurozone such as the Western Balkans. The common currency encourages the creation of multinational banking groups and laid the foundation for European financial market integration (both processes are still under way). The hope was that a larger market would create more dynamic performance.

The eurozone represents a unique experiment. While most monetary unions such as the United States are federal states, the EMU is a monetary union without political or fiscal union, without union-wide unemployment insurance or, at least until recently, without a banking union. Recent crisis demonstrated that such a minimalist institutional framework does not provide sufficient mechanisms to cope with severe asymmetric shocks. In an influential discussion paper, Illing et al. (2012) point out that the indebtedness of the EMU as a whole (as a fraction of GDP), both before and after the crisis, has been quite similar to other major industrial countries except for the far more indebted Japan (see Figure 3.1). They argue that it is insufficient risk sharing and in particular, the absence of fiscal coordination/fiscal union and not the excessive overall amount of debt in the eurozone that makes problems arising in individual member countries grow into problems that threaten the union as a whole.

In the absence of trust, however, it is practically impossible for the member states to agree on fiscal union. While it may be optimal ex-post to provide fiscal transfers in case of sufficiently strong, but temporary asymmetric shocks, knowing that such trans-

Figure 3.1

Gross Public Debt relative to GDP for Selected Countries and the EMU, 2001–2018



Source: IMF, World Economic Outlook.

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EEAG Report on the European Economy, CESifo, Munich, pp. 61–76.

fers would be made in times of trouble can induce ex-ante opportunistic behaviour on behalf of the recipient(s). Worse yet, under some circumstances transfers could become permanent. This, in turn, would not necessarily benefit even the recipient regions in the long run (e.g. Southern Italy has not been catching up to the Italian North in recent decades, despite large transfers). To reduce the moral hazard problem, a sufficiently strong union-wide fiscal authority would need to be established which, in turn, reduces the scope for independent decision-making by member countries. For these reasons, fiscal union is unlikely to be created any time soon.

The structural incompleteness of EMU is the result of various compromises reached between the countries and, above all, between German and French policymakers. An implicit assumption made at the time of the creation of the currency union was that the constraints imposed by the adoption of the common currency would eventually force weaker performers to reform and liberalise their labour markets. This would provide them with the flexibility needed to cope with potential adverse shocks and deal with high structural unemployment in many cases. However, in a democratic political process, potentially painful social adjustments are more easily imagined than implemented and sustained.

One currently available adjustment mechanism to asymmetric shocks is the free movement of labour across the Union. People naturally tend to move from a country with high unemployment and low job prospects to a country that needs their skills and labour. This can have a strong stabilising effect on the sender country and contributes to the growth of the recipient economy. On the other hand, when highly productive people move from poorer to richer EU countries, this can have a destabilising effect on sender countries through the loss of tax revenues and hard-to-train skilled people (doctors, engineers). Thus, labour movements across the Union do not always lead to Pareto improvements. This mobility is somewhat hindered by the language barrier and is coming under pressure from populist/nationalist forces.

While eurozone member states do not have monetary policy or exchange rate tools at their disposal – responsibility for monetary policy is transferred to the European Central Bank (ECB), which has the primary mandate to preserve the low level of inflation within the eurozone as a whole – member states still have the ability to take on debt (the fiscal channel). This, however, is debt issued in a foreign currency, i.e. in the currency that the country does not control and that cannot be inflated away. This sets a de-facto limitation on how much debt a eurozone country can take on without, potentially, getting into trouble. In order to prevent ex-ante excessive risk-taking by member countries, the Maastricht Treaty stipulates that no country should be bailed out. In addition, a set of quantitative criteria are set to further limit countries' ability to borrow. For a heavily indebted country, adherence to these rules implies little or no space for an expansionary fiscal response in case of an adverse shock.

Thus, the eurozone currently lacks some of the standard economic policy mechanisms for coping with temporary asymmetric shocks. Under such circumstances, problems in some countries may not only persist for a long time, but can also cascade through the system, eventually causing problems for the eurozone as a whole.

3.2 IMPROVING RISK SHARING WITHIN THE EMU

The key rationale for the existence of a modern state or a state-like structure is to provide an effective mechanism for sharing certain types of risks across different generations in a particular territory. Such structures evolve over time, adding or losing some of their original functions. The same should hold true for the monetary union. What additional mechanisms should the EMU develop in order to significantly improve risk sharing within the system without, at the same time, causing undue strains between member states? In search of hints, let us consider a well-functioning monetary union, namely the United States.

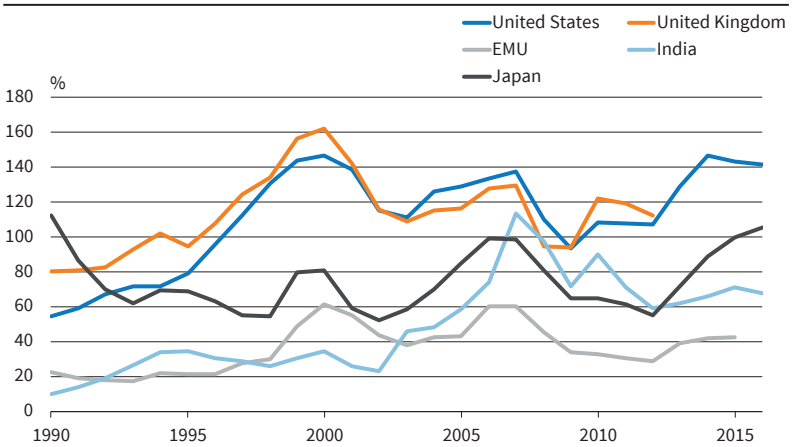
Asdrubali et al. (1996) study risk sharing among states in the United States in the period 1963–1990. They find that 39 percent of shocks to gross state product is smoothed via capital markets (through cross holdings of capital across state lines), 23 percent of smoothing is achieved via credit markets (by adjusting lending and borrowing of banks on national credit markets)[1], while 13 percent is achieved through the federal government. Decomposing US federal government smoothing, federal tax system smooths 4.3 percent of changes in gross state product, the transfer system smooths 6.3 percent, federal unemployment benefits smooth 1.9 percent while federal grants to states smooth 2.5 percent. In total, 75 percent of the shock are smoothed via capital market, credit market, and federal government channels. Additional adjustment is achieved through interstate migration.

Crucially, much of the risk sharing between states in the United States is done automatically via private markets, i.e. without direct involvement of the government(s). This is part of the reason why people in the United States, unlike Europeans, do not discuss which states are, over time, gaining or losing from being part of the union. Also, in the United States practically nobody raises a prospect of 'undoing' the union. This issue was settled, in a very bloody way, during the Civil War. This allows for smooth risk sharing across different generations. In contrast, many Europeans impli-

[1] Demyanyk et al. (2007) demonstrate that US banking deregulation had a positive effect on interstate personal income risk sharing for the period 1970–2001, with a larger effect in states where small bank-dependent businesses were more important.

Figure 3.2

Stock Market Capitalization relative to GDP for Selected Countries and the EMU, 1990–2016



Source: Federal Reserve Bank of St. Louis. © CESifo

citly assume that the undoing of the monetary union (and, perhaps, even of the European Union itself) may be possible or even desirable. Since the EMU is a currency union of sovereign democratic states, to ensure its long-term viability, its risk sharing features should be attractive enough to a sufficient number of people. This could, in turn, encourage other EU members that are currently not eurozone members to eventually join the union. Below we summarise some ideas for improving risk sharing within the eurozone.

As we have seen above, capital market integration is potentially a very efficient way of risk sharing between various parts of a monetary union. It is also politically less controversial than some of the other major risk-sharing mechanisms. Two important aspects here are the reduction of market incompleteness (and deepening of the market), as well as the improvement of capital mobility across the union. Unfortunately, capital markets in continental Europe are not very developed. Figure 3.2 demonstrates this in the case of the stock market, but the situation in the corporate bond market is very similar.[2] This is partly the result of the bank-centric financing that is prevalent in continental Europe.[3]

Part of the problem are differences and inadequacies in legal systems, rules, and regulations across member states. Consider the stock market. Countries with a strong tradition of small shareholder protection tend to have more widespread stock ownership and more developed financial markets. In addition, with different rules, regulation, and business practices investors often prefer to invest in their own country (the so-called home bias in international finance). For smaller, capital-strapped countries, attracting capital from other member states is essential to develop viable stock markets (the same is true for other asset classes). Thus, market depth and completeness and the ability of investment capital to easily flow across member states are closely interrelated. Another important aspect of equity financing is venture capital. Having well-functioning pan-European venture capital funding mechanisms would be essential if Europe is to compete in the New Economy with the United States and China.

The European Commission is currently working on the Capital Market Union. The aim is to create for various classes of financial products something equivalent to Single Market harmonisation for the goods market. One aspect under intense scrutiny is the European corporate bonds market. In a European Commission (2017) report on this topic a set of recommendations is made pursuing six objectives: making the issuance of corporate bonds easier for companies; increasing access and options for investors; ensuring the efficiency of intermediation and trading activities; fostering the development of new forms of trading and improving the post-trade environment; ensuring an appropriate level of information and transparency; and improving the supervisory and policy framework. Harmonising corporate default criteria across the union, for example, would help spread the risk across countries. In the report, mechanisms are proposed to encourage the use of corporate bonds by small and medium enterprises in order to reduce their reliance on bank lending. Retail investors' exposure to corporate bond markets could be facilitated through a Pan-European Personal Pension Product (PEPP), for instance, as well as Exchange Traded Funds (ETFs).

As the Capital Market Union project is run by the European Commission, it pertains to all EU country members, not just the EMU. However, the integration of capital markets within the eurozone should be further facilitated by the fact that assets are denominated in the same currency. Provided that an integrated and deep European capital market were to exist, it is through cross-holdings of equity, bonds, and other instruments that much of the necessary risk sharing in EMU could be achieved.

Another very important process currently under way is the creation of the Banking Union (see Brunnermeier et al. (2018), Chapter 11 for a detailed discussion). It is politically more controversial than the Capital Markets Union. Given the importance of the banking system for European economies, however,

[2] Despite significant growth in the European corporate bond market in recent years fueled by the low interest rate environment and the ECB's Corporate Sector Purchase Programme (CSPP), the value of the European corporate bond market was just 10 percent of GDP in 2017. In the US, the corresponding number was 31 percent (see European Commission, 2017).

[3] In Europe, around 80 percent of companies, and especially small-to-medium size enterprises, are financed via bank lending (see Brunnermeier et al., 2018, chapter 11, p. 221).

and the fact that the eurozone crisis arose as a result of the global financial/banking crisis, it is quite crucial that this is done right. The goal is to resolve two interlinked problems. On one hand, not providing timely liquidity support in times of crisis to illiquid but otherwise sound banks could lead to their insolvency. On the other hand, knowing that such support is going to be unconditionally provided would create serious moral hazard problems and unnecessary risk taking. Optimally, one should not save the few worst performers and erect a firewall protecting the rest (this is the idea behind the Single Resolution Mechanism). Moreover, in order to limit the potential financial and political costs and to improve the accountability of market participants, the bail-in principle is adopted whereby, in a rescue of a financial institution, creditors and depositors would need to take a loss on their holdings before tax payers money is used. The euro area banking union also envisions a Single Supervisory Authority. It is in charge of supervising all banks chartered within the EMU. This role was given to the ECB, with national supervisors relegated to a supporting role. The so-called third leg of the banking union is union-wide deposit insurance. However, given that some EMU member countries do not have their own national deposit insurance scheme to date, the adoption of this third leg is currently uncertain.

One significant step forward would be to establish an EMU banking charter, so that the eurozone would appear like a single country with respect to banks. In that case, regulatory, supervisory, and fiscal aspects of banking would be moved to the EMU level. In good times, tax revenue from banks would accrue to an EMU budget, while in bad times, these funds would be used to restructure troubled institutions without adverse spill-over or contagion effects. The EMU charter would significantly improve EMU-wide risk sharing through the banking channel. Clear benefits from the overall improvement of functioning of the EMU (with some 'incentives' scheme for potential holdouts) may make this important idea possible to implement in practice.

German government bonds currently serve de-facto (albeit imperfectly) as a safe asset in Europe. At a time of crisis, this puts pressure on all other countries contributing to its spread and amplification. It is therefore highly desirable (but not easy) to introduce a European safe bond. One possibility is to create a Eurobond that would mutualise the debt of European countries (see De Grauwe, 2011). However, debt mutualisation, favoured by France, is politically unacceptable to Germany and some other creditor countries because it can cause moral hazard problems. In order to avoid a politically contentious full debt mutualisation, the Euronomics group proposed European safe bonds based on securitisation in 2011 (see Brunnermeier et al., 2018, chapter 11). According to that proposal, the first step would be to have an agency (public or private) purchase a portfolio of government bonds from eurozone countries. The portfolio would be balanced in proportion to the size of the governments' debt up to a certain ceiling (say, 60 percent of GDP). The agency would then tranche the pool into senior and junior bonds, using standard securitisation methods. If a government were to default on its debt, losses would first hit the junior bond. Thus the junior bond would protect the senior bond. If banks were to switch from holding national government bonds to holding European senior bonds, no vicious circle would be formed between sovereign and banking risk. Flight to safety would no longer occur across borders, but from the European junior to the European safe bond instead. While senior bonds would serve as a safe asset in the financial sector, junior bonds could potentially be an attractive investment vehicle for institutional investors, firms, and households. Unfortunately, while theoretically appealing, this concept has not taken off in practice to date, primarily due to fears that the junior tranche would be subject to self-fulfilling runs.[4]

Another possible way to improve risk sharing in the EMU would be the creation of a EMU-wide unemployment insurance as a complement to national insurance schemes. In a recent paper, Jung et al. (2017) consider a theoretical model of a federal unemployment insurance in a group of small economies. In each economy, the labour market is characterised by search and matching frictions, risk-averse workers, endogenous hiring and separation, and unobservable search effort. Countries are subject to persistent business cycle shocks, while international financial markets are incomplete. Federal unemployment insurance serves to automatically redistribute income internationally, thus completing international markets. The authors first calibrate the model to the EMU using as given labour-market policies at the country level. They find that there are notable welfare gains from introducing federal insurance. However, allowing countries to adjust their labour-market policies in response to the scheme significantly reduces the scope of a federal unemployment insurance programme. Moral hazard problems would further reduce the benefits. They conclude that a federal unemployment insurance scheme should provide insurance only under very severe adverse shocks.

3.3 ATTEMPTING TO RESTORE GROWTH AND REDUCE UNEMPLOYMENT IN A FISCALLY CONSTRAINED EMU MEMBER STATE

As explained above, the current EMU setup provides for highly incomplete risk sharing and imposes hard constraints on the member states, especially those facing a high public debt burden. In Section 3.2 we

[4] Another concern is that there would be political pressures to intervene in the junior bond markets in difficult times and ensure that countries with financial difficulties will be able to sell their junior bonds. As a result, the system could degenerate into one with the mutualisation of public debt, see Advisory Board of the German Ministry of Finance (2017).

discussed possible cooperative measures to improve risk sharing within the monetary union. Whether these measures are going to be implemented or, indeed, whether they would be effective in digging areas in trouble out of prolonged economic difficulty is, of course, uncertain.

What can a country facing such severe constraints do on its own to encourage growth and reduce unemployment? One orthodox answer would be to liberalise its labour market and, more broadly, to reform. But, as we have seen in Chapter 2, the ability to reform and experience of it varies widely across the member states. Since reforms take time and can be costly in terms of political capital, it is not surprising that in countries where the cost of implementing such reforms is particularly high, politicians and economists are looking for different, ex-ante less painful ways to stimulate the economy.

3.3.1 Playing with the Fiscal Rules: The Case of Italy

A widespread critique of the European Unions's crisis management focuses on the effects of fiscal 'austerity'. There is now a large body of literature devoted to demonstrating the allegedly destructive character of 'austerity' (Blyth, 2013). The argument is apparently supported by the IMF's self-criticism of its mis-assessment of the multiplier in the early stages of the debt crisis (Blanchard and Leigh, 2013). Fiscal retrenchment brought a much sharper contraction than anticipated, and as a result, deficit and debt levels measured as a share of GDP were much higher than forecast, and subsequently demanded further contractionary measures. The critique then attempts to put an alternative case, in which deficit spending and/or tax reductions stimulate growth, and thus make deficits and debt more sustainable.

The focus of the current dispute revolves around the Italian coalition government's budget proposal that envisions a 2.4 percent deficit. At first glance, the dispute is puzzling given the simple (and rather arbitrary) rules that shaped the Maastricht criteria for accession to the single currency, and then became embodied in the Stability and Growth Pact: a 3 percent maximum for the size of the government deficit to GDP and a 60 percent debt ratio (2.4 is less than 3!). But those ratios obviously did not correspond to what markets may be prepared to finance; and they do not really correspond to economic logic either. Consequently, the rules have been adjusted, and refined, so that they are now quite complex and aim to adjust the fiscal position over the business cycle. In the 2011 reforms, popularly known as the Six Pack and the Two Pack, the member states agreed to adjust toward a Medium-Term Budgetary Objective (MTO), designed to preserve a safety margin with respect to the 3 percent of GDP reference value for the government deficit. That is the superficial reason why the Italian proposal of a 2.4 percent deficit has become a challenge. The MTO, however, was specifically designed so as to be able to accommodate a measure of flexibility, particularly with regard to investment objectives.

The broader and more significant challenge behind the Italian stance is that the budget proposal treats the 2.4 percent as viable on the grounds that it will lead to higher growth, which will then increase the denominator in the GDP ratio calculations and thus ensure viability and success. Over the past years, after decades of low growth and then a fierce double-dip recession, Italy has staged a modest recovery, with 1.5 percent GDP growth in 2017. But the growth rate is slipping again, the 2018 projection of the IMF is 1.2 percent, and the Banca d'Italia and the IMF are projecting 1.0 percent for 2019 (the European Commission at 1.2 percent is more optimistic). Italy's new proposal is designed to give a needed temporary boost to growth. By contrast, the Italian government argues that its measures will trigger consumer spending and push growth up to 1.5 percent. It is an attempt to pull the country up by the bootstraps, with echoes of the famous claim of Arthur Laffer in the 1980s about the self-financing character of tax cuts.

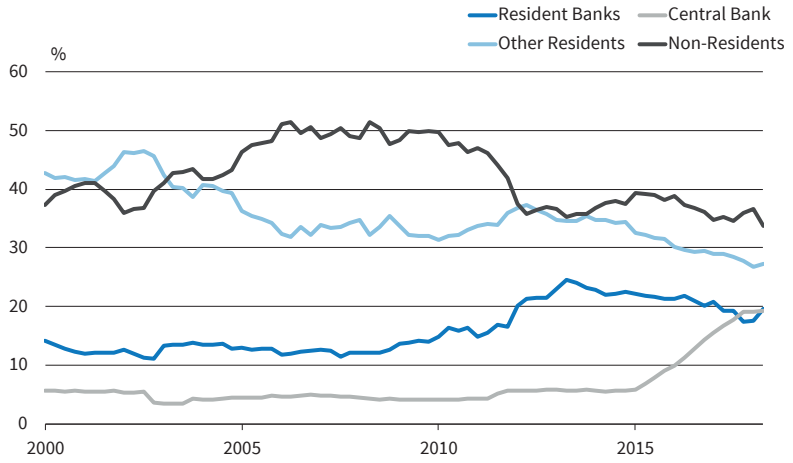
Most importantly, the budget goes far beyond numbers: its basic point is political. It is designed to show that an act of national will can achieve results. The fiscal package represents not only an overall stimulus, but it also attempts to tie together the two quite disparate parties in the government coalition. The right wing coalition party, the Lega, wanted a simplification (and reduction) of tax rates, and ultimately a standard rate, hoping that this would reduce the problem of tax evasion and avoidance. It got a low 15 percent basic tax for artisans and the self-employed, and a tax amnesty. The left party, Cinque Stelle (5 Stars), got a basic minimum income – means-tested, as opposed to the sometimes rather utopian suggestions of a universal income as a way of responding to unemployment generated by technology and globalisation. Both sides wanted to boost consumption, and so cancelled a planned rise in VAT. In addition, both wanted to reduce the pensionable age – a move which has no immediate fiscal consequences, but which will impose a longer-term burden on young people.

There is also a very obvious national, not to say nationalist, element. This is a budget designed to defy Europe, and to make the point that, in a democracy, people should and can vote for their government and their tax rates and their fiscal regime. There are also some savings envisioned, including administrative simplifications and reduced spending on housing and migrants.

Both the growth element and the national and anti-EU rhetoric appeal to external critics of the European Union, Trump and Putin. Sometimes both leaders have referred to the possibility of fiscal as well as political support, buying Italian government bonds. Legally, it is of course possible for the US Treasury

Figure 3.3

Evolution of Italian Sovereign Bank Holdings



Source: Bruegel. © CESifo

to buy foreign assets, and it has done that as part of cooperatively designed rescue packages in the past. But the thought of the United States taking a deliberate action to prop up one European government that is challenging the European Union would not only look like very aggressive diplomacy. It would also look as if Trump is trying to construct a new internationalism – a nationalist internationalism – in place of the 'globalism' he attacks, and which he thinks the European Union embodies.

The discussion of Italy's budget, and responses to it, has become a blame game. The expansionary effect of the budget deficit will be counteracted by a contractionary impulse following from the effects of higher borrowing costs for the government and banks (Blanchard and Zettelmeyer, 2018).

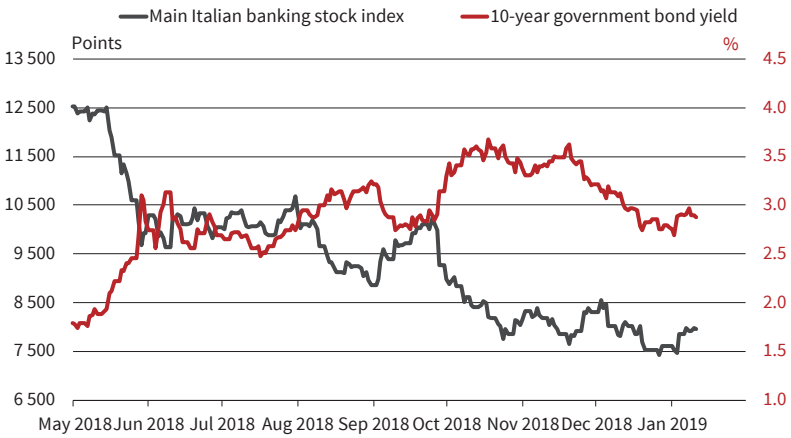
Italians can draw sobering thoughts from observing crises in Argentina, Turkey, and Venezuela (countries that do not have to abide by European Union and euro area policy constraints, but do not seem to be doing so well as a result). In autumn 2018, the interest rate on 2-year Italian public bonds stands at 1.27 percent, but was 0.64 percent in July and -0.20 percent in April. The government announced its intention not to heed European Commission recommendations, yet admitted that markets could force its hand: fiscal policy would have to be tightened should the spread reach 400. If this was a credible promise, the spread would not reach that boundary. But keeping the spread at or just below 400 basis points is not a solution: when the debt is 130 percent of a stagnating GDP, one would need to transfer a primary surplus of about 5 percent of income to holders of debt who are compensated for a default that does not happen. This is neither politically feasible nor economically sensible, just like the more recent idea of decreasing the deficit if the deficit/output ratio grows more than expected. Presumably, this would be due to a decline in the denominator, and it is hard to see how an automatic destabiliser would be appropriate.

The most obvious immediate financial problem affects Italy's banks rather than its government. The perception of an increased risk to Italian government debt pushes yields up, and brings down the price of the government bonds – a considerable proportion of which are held on the books of the banks (Figure 3.3). The banks themselves need funding, and have a large quantity of bonds that need refinancing soon. The consequences of the increased cost of government funding thus has a direct impact on bank equity valuations (see Figure 3.4). Falling asset values reduce bank capitalisation. This is, in turn, reflected in an increase of systemic risk in Italian banks, while their capacity to absorb shocks has decreased (see e.g. the Systemic Risk Documentation for Italy by the NYU V-Lab). New capitalisation could become necessary, perhaps even from the government. However, that would run up against another set of EU rules, this time on state rescues. As banks increasingly come under pressure, they increase the cost of borrowing for corporations and individuals, thus hindering the recovery.

The Italian government is signalling its opposition to the European Union on a range of mea-

Figure 3.4

10-year Italian Bond Yields and Main Italian Banking Stock Index, May 2018–January 2019



Source: Reuters. © CESifo

sures – from fiscal arrangements to the treatment of migrants. It is appealing to ideological affinities with Trump and Putin in a struggle against the European Union. It is also signalling solidarity with other anti-EU movements in other countries. Politically, neither side can afford to be seen to flinch. The Italian government would discredit itself in the eyes of its voters; the Europeans would have to give up on the painful process of rethinking fiscal rules so that they are mutually consistent.

Are Europeans accustomed to the art of finagling impossibilities? Indeed, Italy is not the only European country facing difficulties. The next crisis spot could be France, which is currently witnessing a popular backlash after attempting to raise taxes and, thus, reduce its public deficit closer to the safe zone. Italy today can be viewed as a testing ground for both the constrained countries and the rest of Europe. It shows that, contrary to populists' claims, there is rarely an easy way out of a prolonged stagnation.

3.3.2 Parallel (Para-fiscal) Currencies

The introduction of a parallel currency is an additional topic of controversy. It is mostly intended as a threat if negotiations over fiscal accommodation fail. Most of the proposals combine the introduction of a parallel currency or fiscal currencies with the idea of providing a way to improve liquidity in the system without formally violating the eurozone's legal restrictions (but sometimes verging close). Before we discuss some recent proposals, let us take a historical view on parallel currencies. As we shall see, they have a mixed track record.

A Historical Perspective on Multiple and Parallel Currencies

Over a long historical timespan, multiple currencies were the rule rather than the exception. The commercial centres of early modern Europe, the Italian city states, and the Netherlands, maintained a double standard over long periods of time, in which large payments were contracted in a gold linked currency (in Florence, the florin fiorino), while smaller payments, including wages, were made in a silver currency (piccioli). Since the gold and silver ratio was not fixed, an adjustment in the ratio gave a measure of wage flexibility for enterprises whose major liabilities were fixed in gold. Over the course of the fifteenth and sixteenth century, there was a substantial fall in the silver price relative to gold (Goldthwaite, 2009). Many historians believe that the monetary flexibility that made for an absence of nominal wage rigidity was a source of resilience and strength in early modern Europe (Neal, 2000). In the first half of the nineteenth century, most states (including the United States) did business in a variety of bizarrely confusing currencies, and in addition some (like the United States) suffered from banknotes whose traded value varied due to differing estimations of the solvency of the issuing bank. Moving towards single national currencies was heralded as an achievement of the modern world, and formed a building block for national identity in post-unification Italy and Germany, and in the post-Civil War United States (Helleiner, 2002).

There is also a long history of states (and sometimes sub-sovereign bodies and corporations) issuing quasi-money that is not quite identical to legal tender. States constrained by budgetary rules aimed at limiting fiscal activity have regularly and often experimented with forms of quasi-currency issue aimed at circumventing legal or constitutional restraints. The most notorious early experiments with paper currency started in this way. John Law in France introduced a note-issuing bank in 1716, whose bills were intended to be convertible into legal tender coins; but in the spring of 1720 gold and silver was demonetised, and the paper became inconvertible. During the French Revolution, high denomination assignats secured against *biens nationaux*, property (mostly real estate) seized from the clergy, the nobility, and the government was used to make payments to the government's creditors; the paper could be used to purchase the *biens nationaux*, but rapidly traded at a substantial discount (Velde, 2007). The experiment amounted to a government anticipating its revenue from privatisations.

In post-World War I German inflation, many local governments and corporations issued emergency currency (*Notgeld*) when they did not have access to central bank money. After the stabilisation of the German currency on a gold basis in the Weimar Republic in 1924, the ability to borrow from the central bank was limited, which in turn limited the government's room for manoeuvre during the Great Depression. As an anti-depression measure, the government introduced tax certificates (*Steuergutscheine*) in 1932 to be used for work creation measures, which could be used to make tax payments in future years.

The Great Depression also produced some experiments in local currencies. One of the most famous was in the small Tyrolean town of Wörgl, where local 'labour certificates' were issued that could be used to pay local labourers' wages and exchanged for local goods in local stores. Each note needed to have a stamp attached each month to preserve its value. This feature is referred to as vanishing currency or *Schwundgeld* and was intended to defeat the hoarding and deflationary mind-set of the Depression. The experiment lasted in 1932 and 1933 and is sometimes credited with a successful mitigation of a catastrophic impact of the great depression on the town of Wörgl and its vicinity (Litaer, 2002). The 'Wörgl Experiment' addressed the shortage of liquidity in the local economy in the gold standard regime. The experiment was concluded when the gold standard in Austria was abandoned and the liquidity in the 'official' paper cur-

rency was restored. A less dramatic experiment with a local alternative currency in Switzerland (*WIR Geld*) survives to the present day in a limited form.

In Argentina, with a currency (the peso) tied to dollar holdings in the central bank in a strict currency board arrangement in 2001, provincial and local governments started to issue 'treasury letters in cancellation of obligations', (*Letra de Tesorería para Cancelación de Obligaciones de la Provincia de Buenos Aires*), bonds redeemable at 7 percent interest in one year's time, and widely called 'patacóns', after a slang term for fake money used in a popular Argentine comic book. Some public sector providers (like electricity companies) accepted them, others took them only in partial payment. The national treasury issued its own 'Lecops', which constituted a breach of the limits on monetary expansion imposed by the currency board. As long as the dollar convertibility of the peso remained, and there was a shortage of means of payments, the instruments fulfilled a genuine and quite useful purpose, but that purpose disappeared with the suspension of the peso-dollar peg in January 2002, which fuelled widespread cynicism about their use. That cynicism was also fed by the poor production of the alternative currencies, which made counterfeiting (as in the case of nineteenth century US banknotes) easy.

In the late 1990s, skilled, but increasingly disenfranchised people in Argentina also created a parallel economic ecosystem called *Redes de Trueque* (RT), or *Barter Networks*. The means of payment were in the physical form of scrip called *créditos*. These were created by the organisers and voluntarily accepted by participants. The RT networks reached, at their peak, 20 percent of the economically active population in twenty-two of Argentina's twenty-three provinces with an annual turnover equivalent of 1 billion US dollar. Organisers claimed that individual members' consumption increased by, on average, 600 US dollar a month, or double the amount of the minimal wage. The movement then started to crumble, and shrank in 2003 to a tenth of its former size (Gomez, 2016). For the system to work, the key element is trust. Namely, participants need to trust both the organisers and other participants that the system shall not be abused, i.e. that the transaction ledgers are legitimate. Trust is easier to establish in smaller, tightly knit communities where everybody knows each other and where punishment for cheating can be extracted directly. After a while, once its reputation is built locally, the network can be, under some circumstances, spread to larger distances.

These recent and older precedents were widely discussed in the aftermath of the 2008 financial crisis. In July 2009, in the middle of the financial crisis and faced with a budgetary crisis intensified by a balanced budget requirement, the state of California issued 'registered warrants' otherwise known as IOUs that it promised to redeem at face value plus 3.75 percent interest, and that could be used for future California tax liabilities.

Some commentators urged over-indebted European countries to take a holiday from the euro and introduce a parallel currency, with many citing positively the Argentine example (Goodhart and Tsomokos, 2010). Greece developed many local self-help organisations along the lines of the Argentine *Retes de Trueque,* known as *Local Alternative Units* (Greek acronym: TEM).

A characteristic of almost all the episodes of the introduction of an alternative currency is uncertainty about the exchange rate at which the obligations might be converted into regular money or legal tender. Even the quite limited California IOU issue traded at a discount. There is a dilemma for the government: either the promise of convertibility is maintained, in which case it is hard to see any long-term advantage in the proceeding; or the alternative instrument is used as a way of reducing debt, in which case substantial disruption and uncertainty about the credibility of the state as a debtor ensues. The creation of new fiscal promises in the form of IOUs either augments the stock of state debt (with a convertibility promise); or it reduces the likelihood that future debt will be serviced because tax certificates create a de facto seniority, reducing future tax revenue and hence the means to service government debt.

If the underlying problem is held to be competiveness, or deflationary expectations, non-government local currencies may provide a better answer. But they suffer from problems of credibility when they move beyond a very narrow circle of users (as in the case of Swiss *WIR Geld*).

Mini-BOTs[5] and Tax Credit Certificates (TCCs)

Before we begin the discussion of these proposals (which is largely based on Papadia, 2018), it is instructive to recall some of the main characteristics of money. Conventional money has a zero nominal return (some advocates of e-money argue that ending this constraint would make monetary policy more adaptable to extreme circumstances, such as a threat of deflation), and no expiry/redemption date associated with it. It is the medium of exchange, i.e. used for the provision of liquidity services. It is also the unit of account in which prices of all goods and services are denominated.

The concept of mini-BOT was advocated by Claudio Borghi Aquilini of the Lega. In the agreement between the Lega and the Cinque Stelle movement, mini-BOTs are referred to as 'government bonds of small cut': they replicate the structure of the French Revolution assignat, originally a high denomination security but then split into smaller denominations to encourage its use. Mini-BOTs are

[5] The name BOT stems from *Buoni Ordinari del Tesoro,* or *Ordinary Treasury Bonds.*

IOUs issued in paper form and in small denominations (€1 to €500). Like money, they would not pay interest and have no maturity. The government would accept mini-BOT for future tax payments and for the payment of goods and services supplied by state-run companies. Thus, they would have value to a holder. Proponents also hope that mini-BOTs would be used for payments between private agents but the government would not oblige private agents to accept them. Thus, at least in this incarnation, they would not be a legal tender.

Due to their character (paper form, small denominations) their proponents believe that they would probably be spent locally, and would thus stimulate growth in the Italian economy. Borghi Aquilini sees mini-BOTs as a tool of fiscal expansion without relying on the euro as well as a necessary first step towards the abandonment of the euro by Italy. The quote found in Papadia (2018) argues this point explicitly: "It's true that mini-BOTs are in euro but once they will be widespread they will form a sort of 'spare wheel' that will make the transition to our currency much easier. […] the day of the passage [to the new currency] it will suffice to declare the mini-BOT the new money."[6]

Bossone and Cattaneo (2016) proposed Tax Credit Certificates (TCCs). Their proposal combines the idea of using fiscal policy as a cure to the 'liquidity trap' with 'helicopter money' to inject new purchasing power into the economy. TCCs would be assigned free of charge to households and enterprises. They would entitle holders to receive, at redemption, rebates at face value on taxes and all other financial obligations payable to the public sector. This is similar to mini-BOT. On the other hand, holders may only exercise their right after two years from TCC issuance and the programme would stop after four years. Thus, in contrast to mini BOTs, TCCs have maturity. Again, the historical precedent to TCCs can be found in the *Steuergutscheine* issued in the last year of the Weimar Republic, for example, which came in both large and small denomination issues.

For the purposes of social equity and to encourage consumption, households would receive TCCs in inverse proportion to their income. Companies would receive them proportional to their labour costs. Private agents would be allowed to trade TCCs prior to maturity, probably at a discount. Buyers, according to the proponents, would be households, enterprises, and other entities that want to use them for deferred tax savings. Financial intermediaries could buy TCCs at a discount from those who want to sell them, and either use them for future fiscal rebates or sell them at a lower discount and make a profit.

By issuing TCCs the government would grant the private sector immediate spending power while facing deferred revenue shortfalls that are supposed to be recovered prior to redemption through an increase in revenues generated by the expected output growth. According to the proponents, this is supposed to work in a depressed economy provided that the fiscal multiplier is high enough. It is worth noting that TCCs are not traditional debt instruments since the government makes no commitment to repay them in euros. It only promises to accept redeemable TCCs in exchange for fiscal rebates. Moreover, unlike government bonds, government cannot be forced to default on TCCs.

The authors of the proposal argue that even although there will be no legal obligations for private parties to accept payments in TCCs in exchange for goods and services, this may happen if payment infrastructure allows for their circulation as electronic securities. The motivation behind the idea of using electronic form for TCCs is not explained. One possibility is that in this way they would be less likely to be treated as a parallel currency by the ECB than if they were in paper form (like mini-BOTs). However, they would also be more readily used for criminal activities (see the next subsection).

Despite some differences, mini-BOTs and TCCs are essentially similar. Both are, in effect, hybrid securities (money and debt). However, they would be inferior to euros as money and to the standard BOTs as securities.

Indeed, mini-BOT has two characteristics of money: it has no maturity and pays no interest. In that sense, TCC is less like money since it has maturity. But neither are going to be units of account or the medium of exchange accepted by all. Thus, as money, they would be less valuable than euro cash. Like bonds, both mini-BOTs and TCCs have limited liquidity before redemption by means of exchanges in the market. While the issuer is committed to redeem these securities, the redemption is not against the money (euro) and is, therefore, of lower value than standard BOTs. The transaction costs for mini-BOTs and TCCs are likely to be higher than the very low transactions costs prevailing for traditional BOTs. As a result, these securities would be, in several respects, inferior to the standard BOTs.

In the case of TCCs, which one can think of as mini-BOT with finite maturity, their holders would either be forced to trade them prior to maturity in case of financial need (provided that private parties would accept them, a prospect uncertain at best), hold them until they could be used for tax payment, or sell them for euros. If these securities were to be devalued against the euro, their holders would hold them to lower their future tax burden or sell them at a discount to risk-loving traders. In the first case, TCCs would merely be a delayed debt repayment by the government. In the second case, the TCCs would shift wealth from

[6] This prompted immediate worries about the exit of Italy from the eurozone. Bertacche et al. (2018) report the opinions of financial analysts with respect to mini-BOTs. According to them, analysts view them as an attempt to introduce a de facto parallel currency. They express concerns that this would make investors worry about Italy's fiscal sustainability and create serious redenomination risk, since the idea reminds investors of similar discussions in Greece in 2015.

budget-constrained tax-payers towards agents able to speculate on the value of these securities. On the other hand, if the value of the mini-BOT stayed close to the euro its potential economic benefits would not materialise. Local consumption might expand in the short-run as a one-time effect but there would be no competitiveness gain as the wage level would remain unchanged.

It seems clear that these proposals would not provide anything – from the purely technical point of view – that euro-cash and standard government bonds cannot already provide.

A second important point is whether mini-BOT and TCC are tools for increasing the government deficit. The current government fiscal stance clearly points in that direction. Moreover, from the accounting point of view, this is obvious since these IOUs would be distributed without any counter-payment from their receivers. In the interpretation of the Lega supporters, by contrast, a liability of the state in the form of unpaid invoices would be substituted by another liability in the form of mini-BOTs. The advantage would be, in the view of its proponents, the higher liquidity of mini-BOTs with respect to non-securitised claims towards the government. However, this is not very convincing. The government could pay its unpaid invoices by issuing more BOTs, with the advantage that these would be bought by willing investors and not forced upon creditors who would prefer to be paid in cash.

The impact of the mini-BOT on public deficit and debt will depend on whether the market will give more importance to accounting treatment, whereby the deficit and the debt will increase or to economic considerations, whereby one form of public debt – like commercial debt – will be substituted for another form with no change in the overall debt level. The same uncertainty would arise if commercial debt was paid by issuing standard government bonds, so there would be no difference between the two forms of funding in this respect. In our view, no matter the legalese, if mini-BOTs would make it possible to increase the budget deficit they should be evaluated as fiscal expansions not just as a technical change in the funding of a given deficit.

One proposed advantage of TCCs is that since the government supposedly cannot default on them, they can serve as safe assets for the local banks instead of the traditional government bonds. However, given potentially high and variable discount at which such securities would be traded banks could be facing serious difficulty in meeting their capital requirements.

The introduction of mini-BOTs can be consistent with European or Italian law provided that they were just a security, and not consistent with them if they become a parallel legal tender. Overall, it is highly uncertain that the economic benefits of introducing these new fiscal currencies would offset the risks that they would engender. If they trade at a discount (which is very likely), they would amount to a de-facto tax imposed on those entities that are forced to accept them in lieu of payments. More ominously, mini-BOTs would be seen as a first step in the exit of Italy from the euro, reinforcing redenomination risk and increasing the yields of Italian bonds even if a potential Ital-exit and its huge negative effects were avoided.

3.3.3 Peer-to-Peer Currencies

As we have seen above, government issued parallel currencies or fiscal currencies can be very problematic in an EMU setup. Even if they are treated as securities and not as currencies, they lead to a de-facto increase in government debt and deficit. However, apart from governments, people (especially in times of trouble) can start creating their own mediums of exchange. Thus, peer-to-peer mediums of exchange can emerge. Such instruments would neither violate international treaties nor add to the public deficit. On the other hand, the issue of trust looms large in such schemes. Cryptocurrencies provide a new technological take on the problem of establishing trust in peer-to-peer currencies.

Cryptocurrencies

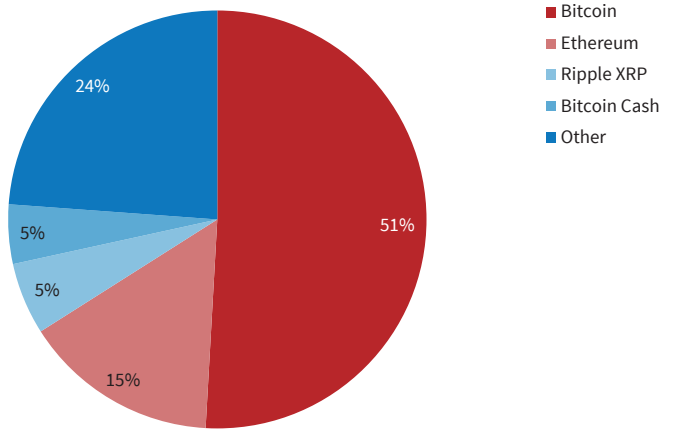
Cryptocurrencies provide a way to build the peer-to-peer exchange of goods and services in a society without using government issued money. The first and the most famous cryptocurrency is Bitcoin, introduced in 2009. Bitcoin has become the subject of intense interest, not least because it has achieved, together with its different variants like Ethereum, large albeit highly variable market value (see Figure 3.5).

Cryptocurrencies are decentralised, anonymous means of transferring ownership and augmenting the supply of digital 'coins'. The system is based on open-source software and relies on the concept of blockchain. Blockchain keeps an electronic record of the entire history of ownership of the digital 'coins' (see Andolfatto, 2018, and Berentsen and Schär, 2018, for more details). In contrast to the privately-owned bank ledgers that record all financial transactions, blockchain is the ledger distributed among the entire community of users. 'Miners' compete to form the next block of transactions in the chain. They have a role analogous to the clearing and settlement process in a centralised monetary system with interbank payments.

Pichler et al. (2018) provide an excellent discussion of the economics of cryptocurrencies. Since participants in these markets are anonymous, for the system to work it has to be costlier to cheat than to add correct information to the new block. Thus, the system adjusts the costs of mining over time to keep up with the available technology. If the costs are too low, then cheating might occur. In a competitive Nash

Figure 3.5

Market Capitalization for some Cryptocurrencies Relative to Total Market Capitalization
Total Capitalization: 207.9 billion US Dollar



Source: www.coinmarketcap.com.

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equilibrium, behaving honestly is the optimal strategy for any miner who believes that most other miners behave honestly. Thus, if over half of the computing power employed in mining is controlled by honest nodes, then the longest chain (the one added to the blockchain) will contain only legitimate transactions. Illegitimate transactions are only sustainable if dishonest nodes control the majority of mining power. This incentive structure, referred to as Bitcoin's 'proof-of-work' concept, is the key innovation that allows for a fully decentralised verification of transactions in the Bitcoin network.

There are some serious limitations on the use of the system. Firstly, to check the transactions in the system, it has to be slow. It takes approximately 10 minutes from when a transaction is posted to when it enters into the blockchain. In addition, the mining process requires a lot of computing capacity and leads to large volume of electricity consumption. A Bitcoin transaction currently requires 80,000 times more energy than a Visa transaction (see Williamson, 2018). These features put a natural limitation on the growth of the system.

Can cryptocurrencies, nevertheless, serve as money? Like cash (fiat money) cryptocurrency transactions are anonymous. On the other hand, unlike money which the central authority can supply elastically, the supply of Bitcoins is fixed, while demand varies greatly. As a result, the value of cryptocurrencies is extremely volatile. In addition, transaction costs are currently very high and transactions are slow by design. Thus, despite the fact that some smaller retail operations accept them (many for marketing purposes), the acceptance of cryptocurrencies as a means of payment in legal activities, in their current incarnation, is likely to be limited. Moreover, there is a good reason to believe that legal payments involving cryptocurrencies would mostly be for relatively small ticket items (Budish, 2018). The purchase of a very large ticket item (like a yacht or a villa, for instance) may make it worthwhile for a miner to cheat, even if the value of the cryptocurrency used in the transaction effectively drops to zero as a result of this cheating. Indeed, the buyer would gain possession of an item of large real value that would be hard for the seller to repossess, given the anonymity factor involved in Bitcoin.

Thus, the most likely legal use of cryptocurrencies would be as a highly volatile speculative investment. They are especially attractive in societies with a weak rule of law (e.g. Venezuela and Belarus). Some people like to compare Bitcoin with gold (because of its limited supply, by design). But, unlike gold, Bitcoin is based on open-source software. At any point in time somebody can introduce a mutation to the system (of which there are already many) which would appear more attractive to investors. In that case, its value can plummet in a very short period of time and not recover.

3.4 ON EXIT

We have seen before that the EMU in its current incarnation does not provide sufficient risk sharing mechanisms needed to overcome a crisis in case of large asymmetric shocks. Cooperative solutions in conjunction with reforms are highly desirable. Given the current political climate, however, they are not easy to implement. Politicians who find reforms politically too costly may be tempted to look for other ways of coping with constraints. In the previous section we have seen that one possibility – the introduction of parallel or fiscal currencies – may be of limited use. Another more extreme option is the outright exit from the monetary union.

A desire to leave the union would be stronger, ceteris paribus, the more potential benefits the government is perceived to incur as a result of this move and the less costly such a move appears to be ex-ante. The key argument for a euro-exit typically goes as follows: if a country introduces its own currency and this currency devalues with respect to the euro, its production would become cheaper and, thus, more competitive. This would lead to higher exports over time, and to higher growth and lower unemployment as a result. This only makes sense only if the main problem faced by the country is the nominal rigidity of exchange rates. If the problem lies deeper in its economic structure and the quality of its institutions, this argument no longer holds (see Illing et al., 2012). In that case, with or without an exit from the currency

Box 3.1

Savona's Plan B

In October 2015, the distinguished but then relatively unknown economist Paolo Savona presented a 'Plan B' whereby Italy would use its sovereign power (*lex monetae*) to determine its currency and issue a new money, abandoning the eurozone. The central features would be a depreciation of about 15-25 percent with the intention of establishing competitiveness vis-à-vis Germany; and a haircut on public debt so as to bring the debt/GDP ratio to 60-80 percent. The plan explicitly includes Italy's (and the Banca d'Italia's) obligations to the ECB, including TARGET2 liabilities, and echoes Hans-Werner Sinn's claim that the legal basis for the enforcement of TARGET2 balances is weak. It is a logical response from the perspective of Italian national interest to Sinn's interpretation, a point also made in the analysis of Gros (2018). The plan achieved a new prominence in 2018, when Savona was proposed as Finance Minister in the new populist coalition government of the Lega and Cinque Stelle; the appointment was blocked by the President of the Republic, and Savona became Minister for European Affairs instead. Recently, it became increasingly clear that the current government in Italy used this plan primarily as scare tactics in negotiations with the European Union regarding fiscal constraints.

union, the country would at some point still need to embark on reforms. Moreover, the reforms may be easier if it stayed within the union, especially if the other member states played cooperatively.

A second potential benefit from having its own currency would be to collect seigniorage. However, a problem country leaving the union is likely to face high inflation pressures together with the devaluation of its currency. While seigniorage initially grows with respect to the inflation rate, its benefit vanishes when that rate is sufficiently high. In extreme cases, as in the hyperinflation seen in Germany in the 1920s, Serbia in the 1990s, or in Venezuela today, inflation can lead to total economic and social breakdown.

Another argument in favour of leaving the EMU could be to attempt to redenominate debt from the euro into the new domestic currency and then inflate it away (see Box 3.1). This would effectively introduce a debt haircut. However, this game is hard to play with investors repeatedly and is likely to result in a significant future increase in interest rates.

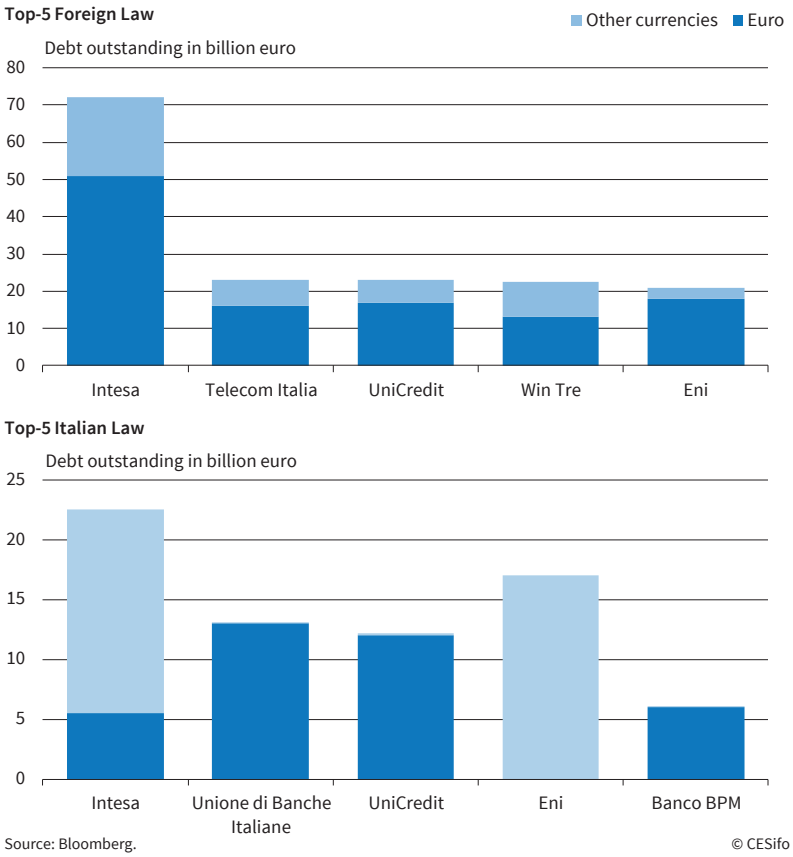
From the legal point of view, redenomination into new local currency is much more easily done, ceteris paribus, if debt is issued under domestic rather than foreign jurisdiction.[7] Namely, in case of domestic law assets the local sovereign can use *lex monetae* to redenominate all contracts into the new local currency. The situation is much more complicated in case of debt issued under foreign law. The outcome then depends on the nature of the exit (see Nomura, 2012). In case of a unilateral withdrawal, with the euro still remaining as a currency of the core EU countries, redenomination of foreign law issues is highly unlikely (except in cases of bankruptcy where local courts decide on awards). Another possibility is a cooperative exit made in multilateral agreement with other EU/EMU partners (again we assume no implosion of the eurozone, just a small-scale exit). In that case, there would be again no automatic use of *lex monetae*. A partial conversion would be a more likely outcome, especially if an EU directive existed that would set specific criteria regarding the redenomination of foreign-law assets into the new local currency. Finally, in case of the exit of a large country such as Italy, a full blown break-up of the eurozone cannot be excluded. In that case, the euro would cease to exist as a currency. Under that scenario, full redenomination into new local currency is much more likely if a breakup without multilateral agreement occurs. In the ensuing chaos, each country would probably apply the conversion of all foreign-law debt into new local currencies. In case of a more orderly breakup of the eurozone there are several possibilities. One is to have redenomination of each foreign law asset into the currency of the country whose law is applicable (the British pound or US dollar, for example). This would, of course, create additional currency risk. Another scenario discussed and preferred by Nomura (2012) would be the creation of an ECU-2, a weighting scheme of new national currencies. If an appropriate EU directive is passed in that regard, the courts of member states could automatically assume that all euro obligations issued under foreign law would be converted to obligations in ECU-2.

Thus, except under the extreme scenario of a total (uncooperative) meltdown of the eurozone, only part of the foreign law debt is likely to be redenominated into the new local currency. In the case of financial institutions, partial redenomination could lead to dangerous outcomes. Galpern (2017) discusses the balance sheet effects for financial institutions in Italy in case of a hypothetical switch to the new local currency. In contrast to the Italian government, which issued mostly bonds under the domestic law, Italian finan-

[7] Investors may pay a premium for foreign-law issuances, especially in times of crisis. Chamon et al. (2018) show that, for the government bonds in the eurozone in the period 2006-2013, foreign-law bonds did indeed carry significantly lower yields in distress periods than their comparable domestic-law counterparts, and this effect rises as the risk of a sovereign default increases. These results indicate that, in times of crisis, governments can borrow at lower rates under foreign law. Nevertheless, the vast majority of Italy's outstanding tradeable debt is currently issued under the domestic law, making it easy to convert such issues into new local currency in case of Italy's exit from the eurozone (see Chamon et al., 2018).

Figure 3.6

Top-5 Non-Governmental Debt Issuers



Source: Bloomberg. © CESifo

cial and non-financial firms have issued a lot more tradable bonds under foreign than under domestic law. Based on data available in Bloomberg on December 7, 2018, we find that Italian financial and non-financial firms had at least 335 billion euros of tradeable debt outstanding issued under foreign law (and around 77 billion euros of tradeable debt outstanding issued under domestic law).[8] Figure 3.6 presents the top 5 non-government entities by the amount of outstanding debt under foreign and Italian law.

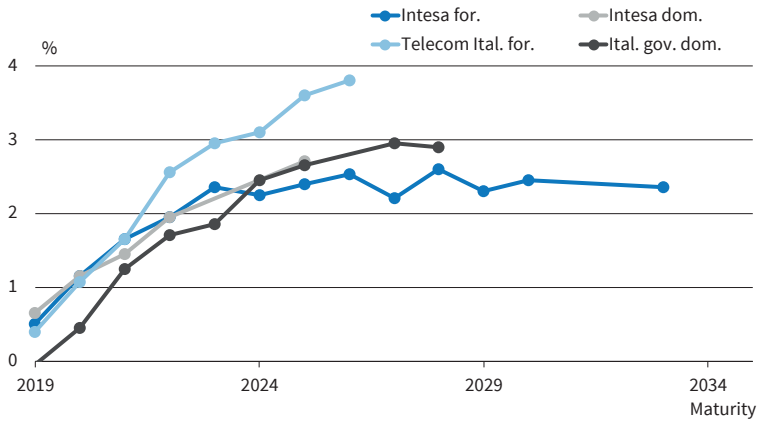
Banca Intesa has by far the largest amount of outstanding tradeable debt (around 93 billion euros), and the majority of it is issued under foreign law. Moreover, of the domestic-law debt issued by Intesa, the majority is issued in currencies other than the euro (predominantly in US dollars). Another interesting example is Eni. Under foreign law it has issued debt primarily in euros. On the other hand, under the Italian law, it has issued only in foreign currency. The numbers present the average of bid and ask yields for bonds maturing in a particular year weighed by the amount of debt outstanding. To construct this figure, we use only option-free bonds issued in euros.

As a rule, domestic-law issuances are of shorter maturity. Moreover, while the domestic-law Italian government debt has lower average yields for shorter maturities than Intesa, this is no longer the case for Intesa foreign-law bonds of similar maturity (see Figure 3.7).

On the asset side, Italian banks have a heavy concentration of Italian sovereign bonds and other domestic law assets, which are subject to easy redenomination. This leads to a contingent currency mismatch. In the case of unilateral redenomination to lira, this could become a capital hole and a contingent sovereign liability. Financial derivatives and loans (non-tradeable debt) would probably add to the potential mismatch in the financial sector. Thus, the mere threat of redenomination, let alone actual redenomination, can lead to serious problems for Italian banks (see the discussion in Section 3.3). This may force the government to recapitalise banks and, thus, issue more debt, most likely under foreign law

Figure 3.7

Weighted Average Yield of Selected Italian Bonds



Note: The figures present the average of bid and ask yields for bonds maturing in a particular year weighted by the amount of debt outstanding. To construct the figure, we use only option-free bonds issued in euros.

Source: Bloomberg. © CESifo

[8] Given that the data found in Bloomberg are unlikely to fully cover the outstanding tradeable debt of Italian firms, this amount (i.e. 335 billion euros) is just the lower boundary of debt that would be hard to redenominate under the *lex monetae*.

and in foreign currency. As a result, exiting from the eurozone may increase government debt, instead of reducing it.

Another potential outcome under partial redenomination deserves a mention, namely the one whereby, after the introduction of the new currency, the bulk of the assets and liabilities on bank balance sheets remains in euros. This can happen if the authorities, frightened by the prospect of the collapse of financial institutions, allow them to keep deposits and other assets and liabilities denominated in euros on their books. In that case, no direct currency mismatch occurs, but a risk of another sort develops. Namely, if wages are paid in the new currency, but mortgages, for example, are denominated in euros, a large devaluation would be potentially devastating to people's ability to repay the loans. Knowing this seriously constrains the government with respect to the type of monetary policy it can pursue. This is currently observed in the highly euroised economies of the Western Balkans such as Croatia and Serbia. Due to financial stability considerations, these countries do not allow any serious depreciation of their domestic currency. Introducing their own currency would be of limited benefit under these circumstances.

The costs and risks considered to date are not the only ones. It stands to reason that if a country were to decide to leave the monetary union uncooperatively, i.e. without a previous agreement with its partners (including the ECB), the other parties involved would do whatever they can to protect themselves from the negative externalities that such a move would impose on them. This would probably result in an immediate termination of any support measures available to financial institutions in the exiting country, as well as in the introduction of various protective risk-fencing measures. Capital could massively fly out of the country and/or strict capital controls would have to be introduced. This would further impact both the exiting country and its more exposed partners. This effect would be stronger the more financially interconnected the country in question is with respect to the rest of the union. This can trigger pressures that would eventually lead to a meltdown of the EMU, and possibly even of the European Union, especially if a country of the size and importance of Italy were to leave the monetary union (see the discussion in Nomura, 2012). Let us now consider the potential consequences of a breakup of the EMU and the European Union itself.

In the sovereigntist camp a common misconception exists (even if it is not always explicitly stated) that the breaking up of the monetary union is likely to have similar consequences as the abandonment of the fixed exchange rate regime in the 1980s. This is a dangerous fallacy. Maybe an analogy would help. One can think of a steady relationship between two people without full commitment as the equivalent of pursuing a particular exchange rate regime.[9] On the other hand, creation of the monetary union is like entering into a marriage. In a marriage involved parties do not always have identical interests and can argue with each other. But, a successful marriage requires an ability to understand the other side, as well as to find workable compromises in all situations of life. An alternative is a divorce, which can be very messy with unpredictable costs and consequences.

In the past very few monetary unions have broken up peacefully or without major social, political, and/or economic turmoil. One such example was the dissolution of Czechoslovakia. Other examples of the breakup of the monetary union (e.g. Austro-Hungary, Soviet Union) caused serious economic and social upheaval, while the breakup of Yugoslavia also led into a bloody civil war.

In order to reduce the ex-post costs of a breakup, Fuest (2018) argues for the introduction of an exit clause that would regulate under what circumstances and how a country could leave the eurozone. Currently the only clearly legal way for a country to do so would be to invoke the Article 50 of the Lisbon Treaty. However, this would force it to leave the European Union as well. In addition, there is presently no mechanism to expel a country that, through gross misconduct, endangers the functioning of the currency zone. According to Fuest (2018), the optimal exit clause should allow a country to exit the eurozone without automatically exiting the European Union, as well as explaining under which circumstances, and how a member country could be expelled from the monetary union. The hurdles to both the voluntary exit and the expulsion should be set quite high. In addition, in contrast to Article 50, the delay between the announcement to leave and the actual leaving date from the eurozone has to be much shorter than the two-year time frame envisioned in Article 50. Moreover, the announcement to leave should be immediately followed by the introduction of capital controls to prevent capital flight. The exit clause should also include provisions that would safeguard the European financial system.[10]

Adopting ex-ante guidelines for an orderly exit from the eurozone, and ultimately its break-up involves a difficult trade-off. On the one hand, this would be a signal that the break-up is indeed a possibility, something akin to signing a pre-nuptial agreement 20 years into the marriage.[11] This can become a self-fulfilling prophecy. Formalising the possibility of a break-up may lead to short-term thinking and

[9] Both the Treaty of Maastricht and ECB Chairman Mario Draghi talked about the irrevocable nature of the eurozone's creation (see Fuest, 2018).

[10] We have already touched upon the issue of redenomination of securities and the proposal to introduce ECU-2 as a tool for smoothing the process of eurozone break-up in case of foreign law securities. There are, of course, several other important issues to consider (see Fuest (2018) and references therein).

[11] The adoption of Article 50 of the Lisbon Treaty many years after the creation of the European Union is analogous.

provide incentives to try to exploit the system where it is still possible. Let us recall that in a prisoner's dilemma problem a finitely repeated game does not have a cooperative solution. It is only when players play forever that a cooperative equilibrium can be reached. Using this analogy, thinking that EMU and/or the European Union are, perhaps, of a finite lifespan pushes for non-cooperative outcomes in dealings between member states and increases the probability of the system's demise. On the other hand, if a break-up becomes a reality, having ex-ante break-up rules for the eurozone could potentially lower the ex-post costs.

Roger Bootle developed a guide aimed at informing the decisions of countries interested in leaving the eurozone (Bootle, 2012). Apart from the issues of redenomination he also considers management of the announcement of the decision to leave (arguing for secrecy until the very last minute), managing devaluation to regain competitiveness and, at the same time, trying to prevent the meltdown of the banking system, and proposing advice on how to deal with the remaining eurozone members.

Implicit in his approach is the assumption that each country should try to secure the most benefits for itself in making the decision to leave and in managing that process. This is potentially dangerous as it can lead to non-cooperative behaviour of member states. In the absence of cooperation, it is not clear whether even having ex-ante rules would help reduce the frictions, just like a pre-nuptial agreement does not guarantee a peaceful divorce. For example, the Yugoslavian Constitution adopted in 1974 explicitly allowed the republics of the Socialist Federal Republic of Yugoslavia the right to self-determination, including the right of secession. While one could argue that the bloody demise of the country could have been avoided if the Constitution had also included an explicit agreement on how to split the country if it came to that, such an agreement would have been very difficult to conclude ex-ante. Moreover, it would not have been necessarily followed up ex-post. The key ingredient missing in case of Yugoslavia was cooperation between the constituents of the federation. In contrast, in the case of Czechoslovakia, there was nothing in the Constitution that discussed the possibility of a break-up. However, all of the parties involved behaved cooperatively and rationally when it came to the break-up initiated by Slovakia. As a result, no major turmoil occurred due to the separation.

In times of a momentous transformation emotions tend to run high, meaning that there is little chance of a rational discourse. The result could be a situation in which cooperation in Europe all but ended, with serious consequences for the entire continent and beyond. The Western Balkans region, bordering the European Union, is still recuperating from the bloody demise of Yugoslavia. Many unresolved national conflicts lurk in the background there. The key stabilising factors in that region are the prospect of eventually entering the European Union and economic growth through close cooperation with the European Union. The disintegration of the EMU and, possibly, of the European Union could trigger serious political instability in the Western Balkans and would leave it vulnerable to the predatory behaviour of the major players outside the region. In addition, a disunited Europe of small quarrelling nations would be a relatively easy economic and political prey, too. Even if outright wars are avoided, the global relevance of Europe would be all but gone. Yet, there is a possibility that the fragmentation would not stop at the national boundaries of member states. In the absence of a pacifying mechanism provided by the European Union, some current EU members may themselves break-up (Spain, Belgium, perhaps even Italy). Old national wounds could reopen (in South Tyrol, for example). Meanwhile, the countries of the European East would be squeezed between a newly assertive Russia and an increasingly unpredictable United States, with China actively entering into the fray.

In this chapter we have seen that there are measures that can and should be undertaken (such as completing the financial markets and banking union) that would significantly improve risk sharing across the EMU and beyond. On the other hand, there are no easy solutions for countries facing financing constraints. In particular, trying to circumvent fiscal rules (including the introduction of para-fiscal parallel currencies) is likely to be counterproductive. In making seemingly expedient political decisions, populist leaders in a position of power can end up imposing not only massive hidden costs on their own society, but on the entire continent and the world, too. It is imperative that contemporary and future European leaders and their voters are mindful of these dangerous externalities.

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Looking Outward: Western Disarray, China Rising

4.1 INTRODUCTION

While the European Union is struggling internally with growing divergence among member states regarding both their economic performance and their support of common governance structures, the international environment is changing rapidly creating new challenges. The two most important developments in the international environment are the shift in US economic policy towards protectionism and against NATO, and the rise of China. The changes in the international environment are linked to the internal challenges faced by the European Union because these changes affect different EU member states differently; and may potentially exacerbate existing divergences and tensions.

The United States has become an unreliable trading partner and strategic ally, with Donald Trump undermining NATO, unilaterally pulling the United States out of the 2015 nuclear treaty with Iran, pressuring the European Union on its military spending, trade, and tariffs, imposing tariffs on steel, aluminium and automobiles, and making overtures to Russia's Vladimir Putin and North Korea's Kim Jong Un.

The growth in the Chinese economy has generated new markets for European exports and sources of imports. China is presenting itself as a defender of multilateralism and a rules-based international order, while the United States is retreating into mercantilism, bilateral deals, and tariff wars. At the same time, Europe has got caught in the crossfire of the escalating US-China tariff war. China's growing economic and political prominence and international assertiveness follows on from its 'Belt and Road' initiative and formation of the AIIB (the Asia Infrastructure and Investment Bank) at the end of 2015. The 'Belt and Road' project provides lavish funding for infrastructure investments in European, Asian, and African countries, but the conditions attached to their financing, ownership, and control raised questions and problems. Chinese efforts to establish control over most of the South China Sea, contested by other countries in the region and world powers, raise tensions and pose the risk of military confrontations in the area.

Next to the United States and China, there are other countries that require the attention of the European Union. The United Kingdom will soon be an external country. The extent to which it will be a constructive partner and ally will depend on how Brexit is managed and whether there will be a cooperative agreement.

Russia presents a menacing face. On the one hand it has significant trade links with the European Union, and is an important source of natural gas to Germany partly using pipelines through the Ukraine, and partly using the controversial Nord Stream pipelines via the Baltic. On the other hand, there are growing fears of military intervention in the Baltic States following Russia's activities in eastern Ukraine, the annexation of the Crimea, its persistent military provocations in the Baltic, and interference in democratic elections in the United States and elsewhere. Russia has supported Assad's position in Syria, and is ready to help Iran as US sanctions create pressure. It has welcomed the authoritarian drift of Victor Orban's Hungary, has been ready to exploit Greece's difficulties under the bailouts of the Troika, and will now offer support to Turkey, which is on the receiving end of US sanctions, has suffered a substantial fall in the value of its currency and is still facing the possibility of a financial crisis.

Japan meanwhile, continues to sustain the multilateral trading system. The United States pulled out of the Trans Pacific Partnership in January 2017, a move that was widely thought to have killed off the whole agreement at the time. Nevertheless, Japan and the other ten participants continued negotiations, and signed a new agreement – the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (the CPTPP) – in March 2018. Japan and the European Union signed an agreement on trade in July 2018.

In this chapter we will discuss the implications of changes in the global environment for the European Union. We will focus on the rise of China. While economic and political relations with the United States are called into question by the administration, the critical issues are clearly defined – conflicts are mostly about defence efforts and trade. The implications of the rise of China for Europe and the European Union are less clear. The presence of China as a foreign investor, as a leading actor in science and technology, and as a geopolitical power is growing rapidly; and the debate about the implications for Europe is evolving fast.

The setup of this chapter is as follows: Section 4.2 discusses the changing role of the United States under President Donald Trump and the impact of Brexit. Section 4.3 turns to the rise of China as a global economic factor. Section 4.4 discusses the impact of China's rise on Europe. Section 4.5 discusses policy implications of changes in the international environment for Europe and the European Union, while Section 4.6 offers some conclusions.

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4.2 DESTABILISING FORCES: PRESSURES FROM THE UNITED STATES AND BREXIT

4.2.1 US Destabilisation

Donald Trump has been fixated on US trade balances with individual countries. Moreover, he has focused on the balance of trade in goods, ignoring services and primary incomes, where the United States tends to have bigger surpluses; and indeed in some cases he has focused on the balance of trade in particular goods, such as the US balance in automobiles with Germany.[1] It seems that, in his mind, trade is a zero-sum game: one side gains, the other loses. This argument appeals to his supporters in the United States who share this view. Imports represent foreign countries taking jobs away from the United States. Surpluses are good, deficits bad. (This is diametrically opposed to Valéry Giscard d'Estaing's complaint in the 1960s that America's trade deficits, financed by printing dollars, which the rest of the world stored as foreign exchange reserves, represented exploitation of its 'exorbitant privilege' as the supplier of the international means of payment. The world produced goods using labour and capital, for which the United States paid by printing dollars at zero cost.) The Trumpian analysis of trade ignores the fact that the US unemployment rate is currently at its lowest for many years; discouraged workers are coming back into the labour force, and the participation rate is increasing.

Trump has launched a tariff war on China. At the same time, he has complained loudly about the EU's trade surplus with the United States, highlighting Germany's trade surpluses, and particularly Germany's trade surplus in automobiles.

US tariffs on steel (at 25 percent) and aluminium (10 percent) were imposed at the end of May 2018 using a section of US trade laws dating from the cold war era, namely Section 232 of the Trade Expansion Act 1962 that was intended to prevent dependence for strategic supplies on Communist enemies. These tariffs have hit imports from Canada, Mexico, Japan, and European countries, who are US allies, rather than Russia or China, from whom the United States buys relatively little steel, as anti-dumping duties have already reduced imports from these countries (Irwin, 2018). The European Union has threatened to retaliate by imposing tariffs on particular goods such as US Bourbon Whiskey and Harley-Davidson motorcycles. The Mexican government intends to retaliate by putting tariffs on pork bellies, apples, cranberries, grapes, certain cheeses, and various types of steel. Canada has imposed further taxes on imports of American steel, aluminium, coffee, candy, pizza, and quiche, representing imports worth around 12.8 billion US dollars.

Trump's initial tariffs, on washing machines and solar panels imported from China, have incited retaliatory Chinese tariffs on American exports of soya beans. Another round of tit-for-tat tariffs has followed and there is a threat of an all-out tariff war breaking out. While the tariffs actually imposed to date are limited in size and scope, a full-scale tariff war could involve a substantial increase on a wide range of goods and services. Trump has threatened to impose tariffs on 500 billion US dollars of US imports from China, and China has responded with similar threats. A dispute on this scale would have a substantial effect on trade flows and a significant impact on real per capita incomes. One estimate is that the effect will be as great as that of the 2008/9 global financial crisis (Jean et al., 2018). An analysis from the Banque de France (Berthou et al., 2018) pegs the effects of a general increase in tariff rates by 10 percentage points at between 1 percent and 3 percent of global GDP after two years.

While China's retaliation has been measured, and the European response has been to propose a general lowering, or indeed a removal of tariffs between the United States and the European Union; it is unclear how long this tariff war will last, or how far it will go. Donald Trump appears to believe that tariff wars are easy to win for a country that is running a deficit. But his policies are unlikely to reduce the deficits, and persistent failure may induce him to retain tariffs longer (Irwin, 2018). The tax cuts passed by the US government in 2017 have stimulated consumer spending and will tend to increase the balance of payments deficit, not reduce it. The deficit equals the excess of total spending over production in the country. Unless spending falls relative to the amount of production, that is, unless there is an increase in saving, there will be no reduction in the deficit.

Donald Trump's policy also overlooks the fact that the United States has a trade deficit with the European Union, but a surplus in services and primary incomes. At least according to US foreign commerce statistics, the United States runs a small current account surplus with the European Union, not a deficit.[2] This implies that US companies are actually earning more in the European Union than vice versa. This questions his view that the United States can 'win' a trade war with Europe.

The US administration is using tariffs more widely as a tool of foreign policy. They have been imposed on Turkey (tariffs on exports of steel to the United States doubled to 50 percent and aluminium to 20 percent in August 2018) in response to Turkey's holding of American citizens. These citizens included Andrew Brunson (now released), a pastor from North Carolina, working in Izmir, who was accused of aiding the July

[1] As a recent study by Felbermayr and Braml (2018) shows, according to US data the United States had a bilateral current account surplus with the European Union in 2017, mainly due to a large surplus in primary incomes and a smaller surplus in services, overcompensating the deficit in goods trade.

[2] See Felbermayr and Braml (2018). Eurostat surprisingly reports a current account deficit for the US, but as Felbermayr and Braml explain, the US figures are probably closer to reality than the Eurostat numbers.

2016 attempted coup d'état, and was placed under house arrest. Tariffs have the advantage for the Trump administration that they can be imposed by an edict from the President without the bothersome need for approval by the US congress.

Trump's repeated complaint that the United States has been suckered into bad deals has prompted the United States to pull out of the 2015 nuclear deal with Iran (the 'Joint Comprehensive Plan of Action'), re-impose sanctions on Iran, and threaten sanctions on any firms that do business with the latter. The other signatories to the deal (the United Kingdom, France, Russia, China, Germany, and the European Union) want to preserve it. The ability of the European countries to resist the effects of the US withdrawal and sanctions are restricted because European firms are likely to be sanctioned by the United States if they do business with Iran. As their US business is more important than their actual and potential Iranian links, they are likely to withdraw from Iran, undermining the beneficial effects on the Iranian economy. European banks, in particular, are very susceptible to US pressure. The European Union has attempted to impose blocking sanctions to protect firms that continue to trade with Iran, but it is not clear that they will be effective. As the United States confronts Iran, and Europe is unable to sustain economic ties, Iran is likely to drift further into the sphere of influence of Russia and China, who are more likely to continue to buy its oil, undeterred by US sanctions. Most Iranian oil, which accounts for a significant fraction of global supply at around 4 percent, is sold to China, India, Japan, and South Korea.

These actions against countries who are not allies of the United States are paralleled by similarly aggressive behaviour towards allies. Using the argument that Europe contributes too little to the costs of NATO and the United States too much, Trump has sustained a verbal assault on Europe, limbering up at the G7 meeting in Taormina in May 2017, and more recently erupting at a NATO summit in July 2018, where he demanded that members increased their military spending to 2 percent of GDP by January 2019, in comments that some commentators interpreted as a threat to withdraw from the organisation, notwithstanding Trump's later assurance that he fully supported it.[3] The German Chancellor Angel Merkel commented after Taormina that: "We Europeans truly have to take our fate into our own hands ...".[4] Trump's words have raised questions about whether NATO will survive, and have undermined any deterrence effect it may have by throwing into doubt the commitment of the United States to come to the aid of other NATO members. There has been concern among European leaders and diplomats that Trump might withdraw the United States from military exercises in Eastern Europe and may scale back the US military presence in Europe, weakening the US security umbrella.

4.2.2 Brexit

From the perspective of the European Union as a whole, the prospect of Brexit is a manageable economic irritant, although it will have significant effects on some members and particularly on Ireland. Brexit will also impact some industries, particularly those with long supply chains that go in and out of the United Kingdom, such as the motor industry. The scale of the effects depends on what form Brexit eventually takes, whether the United Kingdom goes for a Norway-style arrangement, with continued participation in the customs union and single market, with minimal disruption to trade, a Canada-style free trade agreement, or a hard or disorderly departure, with trade conducted under WTO rules. The costs and disruptive effects of Brexit to the United Kingdom become clearer as time passes, and voices in favour of abandoning the entire enterprise grow louder. There is growing support for a second referendum, with staying in the European Union as one of the options on the ballot paper, the others being a 'soft' and a 'hard' (WTO) departure. There is the possibility that no proposal put forward by the UK government will get a majority in parliament, the government will lose a vote of confidence, and a general election will ensue. Both major political parties are divided amongst themselves over Brexit. The Conservative party is openly split into camps of increasing mutual hostility. The extreme pro-Brexit faction wants a clean break from the European Union, are prepared for no deal, and are pressuring the government not to make concessions on migration in return for access to the Single Market. Theresa May's government, surviving with a small majority and reliant on the support of the Democratic Unionist Party (DUP) in Northern Ireland, has been trying to keep a majority of Members of Parliament (MPs) onside, making some concessions to satisfy the Brexit extremists, while simultaneously trying to limit economic disruption.

The Labour Party has maintained an equivocal position on Brexit. The party's membership includes many younger people who support staying in the European Union and older people in former industrial areas who strongly support Brexit. Some MPs represent constituencies that voted to remain, while others represent Brexit strongholds. A cross-party group of pro-European MPs are arguing against Brexit and campaigning for a second referendum. There has been talk of a new party being created to coordinate pro-European politicians and increase the influence of this large, but currently disparate group.

[3] Washington Post, 12 July 2018, "At NATO, Trump claims allies make new defense spending commitments after he upends summit", https://www.washingtonpost.com/world/europe/trump-upends-nato-summit-demanding-immediate-spending-increases-or-he-willdo-his-own-thing/2018/07/12/a3818cc6-7f0a-11e8-a63f-7b5d2aba7ac5_story.html?utm_term=.982cd9a3c944.

[4] Politico, 28th May 2018, "Angela and Jacques get frank with Christoph", https://www.politico.eu/article/angela-merkel-europe-cdu-must-take-its-fate-into-its-own-hands-elections-2017/.

While most of the analyses of the effects of Brexit have dealt with the effects on the United Kingdom, some have examined its effects on the European Union. The IMF (2018) finds that, in the event of 'hard' Brexit, long-term output and employment in the European Union may fall by around 1.5 percent and 0.7 percent respectively, relative to what they would have been otherwise; and to a much lesser degree in the event of a 'soft' Brexit. These estimates are on roughly the same scale as those of other studies. Of course, the effects differ from member to member. Ireland may suffer a 4.0 percent fall in output under a WTO scenario in the long term, while the Netherlands, Denmark, and Belgium would see a roughly 1.0 percent fall. Other members' costs would be smaller. Losses under a free-trade-area scenario are somewhat smaller.

While the economic effects of Brexit on the European Union are small, the political effects may be greater. Whether these effects will be positive or negative remains an open question. Early on, Brexit may have been feared as an existential threat to the European Union. Had the United Kingdom shown that leaving was beneficial – if the United Kingdom had been able to have its cake and eat it, as in the Brexiters' fantasy – it may have led to a rush for the door and a disintegration of the European Union. Indeed, this prospect may have stiffened the EU's resolve to take a firm line in negotiations and prevent any mass exodus from happening, insisting on the inseparability of the four freedoms (of movement of labour, capital, goods, and people) in the Single Market.

In the event, the accumulating evidence that the United Kingdom is shooting itself in the foot by leaving may strengthen rather than weaken the remaining 27-member union. Simon Kuper in the Financial Times notes that populists across Europe have dropped the idea of leaving the European Union: Marine le Pen, Geert Wilders, Matteo Salvini in Italy, Syriza in Greece (Kuper, 2018). The United Kingdom has long been seen in some quarters as a difficult member, seeking successive opt-outs, Margaret Thatcher's rebate, and special arrangements, resisting further integration, advocating widening membership as a force against deepening. As the prime minister of Luxemburg, Xavier Bettel, remarked, "Before, they were in and they had many opt-outs; now they want to be out with many opt-ins." The United Kingdom has attempted to limit the European Union to a trading agreement, rather than a political union. The remaining members may be able to pursue further integration without the United Kingdom holding them back. The UK's departure may weaken arguments for open markets and competition and increase the relative strength of the more corporatist tendencies, represented by France, Italy, and southern European members.

Negotiations between the United Kingdom and the European Union on a withdrawal agreement were bedevilled from the start by the unrealistic and conflicting aims of the UK negotiators, the 'red lines' imposed by the UK government, the weak position of the government operating as a minority and surviving with the support of the DUP, and the problem created by Northern Ireland. They eventually concluded in November 2018, with the publication of a draft agreement[5] and a brief political statement on the future relationship between the United Kingdom and the European Union. But these agreements were only put to a vote in the UK parliament in mid-January 2019. A scheduled vote on 11 December 2018 was withdrawn by the government, anticipating that it would be comprehensively defeated by a combination of extreme Brexiteers, arguing for a clean break with the European Union, pro-Europe MPs aiming for closer integration, or indeed, the idea of abandoning Brexit altogether, and Democratic Unionist Party (DUP) MPs dissatisfied with the possible appearance of any differences in treatment of Northern Ireland and the rest of the United Kingdom. The suspicion of any kind of border in the Irish Sea between Northern Ireland and Great Britain is anathema to the DUP.

The European Union insisted from the start that changes to the relations between the Union and the United Kingdom should proceed in stages; that first the terms of the UK's withdrawal should be agreed, and only after that should the longer-term future relations be negotiated. Accordingly, the withdrawal agreement provides for a transition period from 30 March 2019 until 31 December 2020 (with the possibility of an extension of up to two years) in which little will change, in terms of trade and other relations. The United Kingdom continues effectively to be a part of the European Union, except that it loses its ability to take part in any EU decision-making. Freedom of movement between the United Kingdom and the European Union is preserved through the end of the transition period, and most of the rights of EU citizens in the United Kingdom and UK citizens in the European Union are preserved. The United Kingdom continues to be a member of the Single Market, and to maintain EU social and environmental protection, and abide by EU limits on state aid. The United Kingdom can begin to negotiate trade deals with other countries during the transition period, though these should not come into effect until after a new long-term relationship with the European Union has been agreed.

The most contentious element of the withdrawal agreement has been the Northern Ireland backstop. The Good Friday Agreement of 1988, which ended decades of sectarian violence in Northern Ireland, provided for the removal of a hard border between the Republic of Ireland and Northern Ireland, as both were part of the EU customs union and, in due course, the Single Market. Border posts were much resented and had been the object of attacks by the IRA and uni-

[5] Available at: https://ec.europa.eu/commission/sites/beta-political/files/draft_withdrawal_agreement_0.pdf.

onist forces in the preceding decades. The Republic of Ireland, which may be very badly affected by Brexit, campaigned successfully for the European Union to insist that Brexit would not involve the re-instatement of any such physical border on the island of Ireland. This presents obvious problems should the United Kingdom leave the EU customs union and Single Market. Consequently, the backstop provides that until the United Kingdom and European Union have concluded a long-term relationship that would avoid any need for a physical border, Northern Ireland will remain in the customs union and in the single market, as far as most goods are concerned. However, to avoid creating a need for customs checks on goods moving between Northern Ireland and the rest of the United Kingdom (Great Britain), under the backstop, the whole of the United Kingdom will remain in the customs union. Some checks on goods moving between Northern Ireland and the United Kingdom will be needed, but they can be carried out at other ports and manufacturing plants.

Despite the ingenious compromises involved in the proposed backstop, the various constraints on which have left little room for manoeuvre in negotiations (which have been an exercise in squaring the circle), it has generated furious opposition; from the DUP on account of the remaining modest checks on the flow of goods across the Irish sea, and the possibility of slightly different treatment of Northern Ireland from the rest of the United Kingdom; and from hard Brexiteers in the United Kingdom, on account of the possibility that, if the United Kingdom and European Union fail to conclude a longer-term arrangement obviating the need for border checks between the Republic and Northern Ireland, the United Kingdom may be locked into the EU customs union indefinitely. The European Union as a whole, and the Republic of Ireland in particular, have refused to allow the United Kingdom to exit from the backstop unilaterally and insist on its being by mutual agreement. They have also refused to include an end-date. Despite assurances that the European Union does not wish to see the backstop implemented and that it wishes to keep any period of its implementation as short as possible, proponents of hard Brexit have not been satisfied and threaten to vote against the withdrawal agreement.

One of the many problems is that the draft Withdrawal Agreement (WA) makes it very clear that membership of the European Union is better for the United Kingdom than withdrawal from it. The only possible advantage from the UK's point of view is that Brexit may eventually, after the end of the transition period and exit from the Northern Ireland backstop, permit greater limits on migration into the United Kingdom from the European Union. Any such benefits are, of course, hotly contested, and in any case it is clear that reintroducing such controls would come at considerable economic cost. At the same time, it has become abundantly clear that a no-deal Brexit would be much worse than withdrawal under the agreement, except in the view of a small number of extreme Brexiteers and members of the DUP.

The United Kingdom finds itself in a position in which the negotiated withdrawal agreement is likely to be voted down in the UK House of Commons when put to a vote in the middle of January 2019, as is now scheduled. The European Union has ruled out making any further changes to it, although the UK Prime Minister, Theresa May, has stated that she is seeking stronger reassurances on the Irish backstop. Significant changes to the agreement seem unlikely. The alternatives are that the United Kingdom could leave the European Union without an agreement, or that Brexit might be abandoned altogether.

The UK government has recently stepped up preparations for a no-deal Brexit, setting aside GBP 4.2 billion to cover the costs of these preparations, which include putting 3,500 troops on standby in case of disturbances. Businesses in the United Kingdom are aghast, and many people are incredulous. The European Union is also doing some planning for the contingency of a no-deal Brexit. While a substantial majority of members of the UK parliament appears to be firmly opposed to a no-deal Brexit, and a substantial number in favour of no Brexit, they are distributed across the political parties, and seem unable to coordinate their actions. The equivocal position of the main opposition party, Labour, regarding Brexit is a major obstacle to ensuring a soft Brexit or no Brexit at all. There is a widely-held view that a 'no-Brexit' could only be achieved if legitimised by a second referendum; but holding one in itself introduces risks. There is the unsettled question as to what options should be on the ballot paper, which may be complicated if a three-way choice is offered; a referendum is likely to take some time to set up, necessitating a postponement at the very least; and its outcome is far from certain. While there have been shifts in opinion among the UK electorate, it is not clear that support for either a soft or no Brexit would clearly win.

On balance, it appears that a UK withdrawal along the lines of the negotiated agreement is the most likely outcome, although a 'no-deal' or a 'no-Brexit' outcome is still possible. In the case of a negotiated agreement, there will be few immediate effects on trade flows, or migration, and an interval of 21 months (possibly extended by another 24) in which the United Kingdom can negotiate its longer-term relationship with the European Union.

4.3 THE RISE OF CHINA

In the debate over the economic and political future of Europe, the fact that the global balance of power is shifting towards Asia, and especially towards China, is a key factor. In recent decades various countries in East Asia have achieved spectacular growth rates.

But the rise of China is the most important development, not only because of the size of the country, but also due to its particular political and economic system.

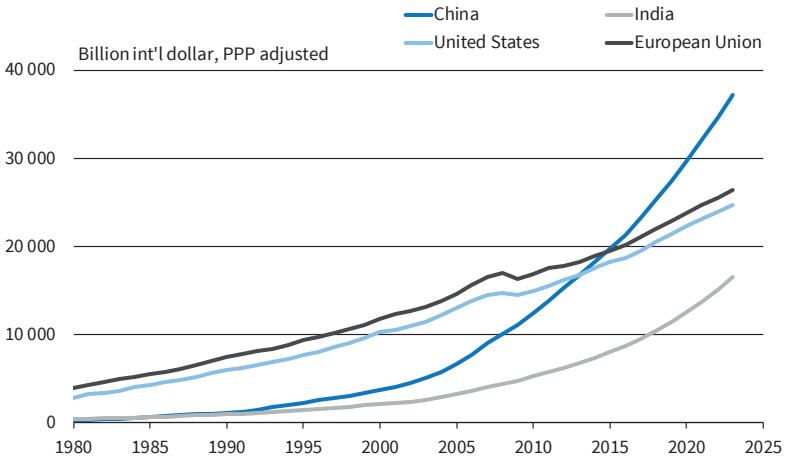
Figure 4.1 compares the development of GDP over time in the United States, the European Union, India, and China, measured in purchasing power parity. According to this metric China overtook the European Union as the world's largest economy in 2015. India is also catching up but at a much lower pace, although its growth is expected to pick up in the years to come. Figure 4.2 shows the size of GDP in current US dollars. Here, the economies of the United States and the European Union are still larger but China is catching up quickly.

The rapid growth of China, and to a lesser extent India too, is leading to a massive shift of weight in the world economy towards Asia. Figure 4.3 shows how the relative shares of global GDP have changed over time, again measured in terms of purchasing power parity. In 1980 the European Union represented almost a third of the world economy. Together with the United States, it produced over half of global GDP, while China's share was negligible. In 2000, the EU's share was still almost a quarter and that of the United States was 20 percent. China's share was just over 7 percent. By 2023 the share of the European Union and the United States will have fallen to 15 percent respectively, while China will account for over 20 percent of world output. China and India together will represent one third of the world economy, according to an IMF forecast.

How is China's growth reflected in living standards? Figure 4.4 shows the catch-up process in per capita income. In 1980 per capita income in China was just 2.5 percent of the US level. In 2003 it reached the 10 percent threshold and in 2023 it will reach almost a third. The discrepancy is

Figure 4.1

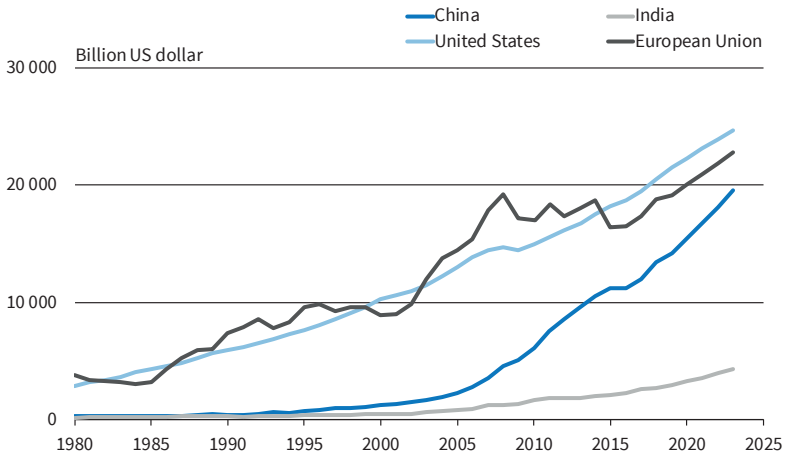
GDP of China, the European Union, India, and the United States since 1980



Source: IMF, World Economic Outlook (October 2018). © CESifo

Figure 4.2

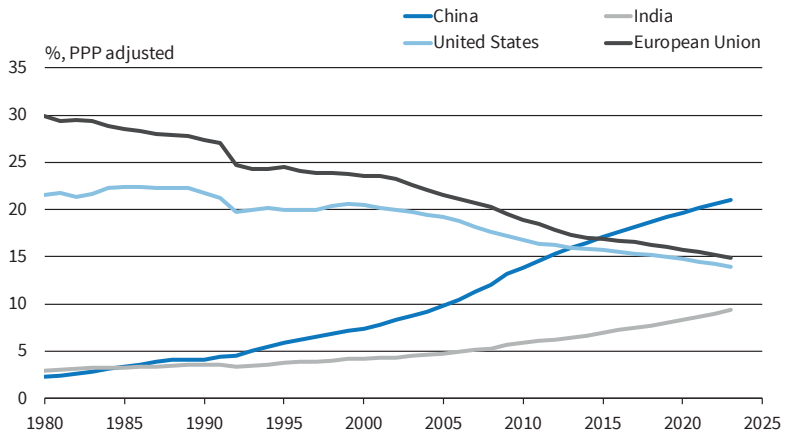
GDP of China, the European Union, India, and the United States since 1980



Source: IMF, World Economic Outlook (October 2018). © CESifo

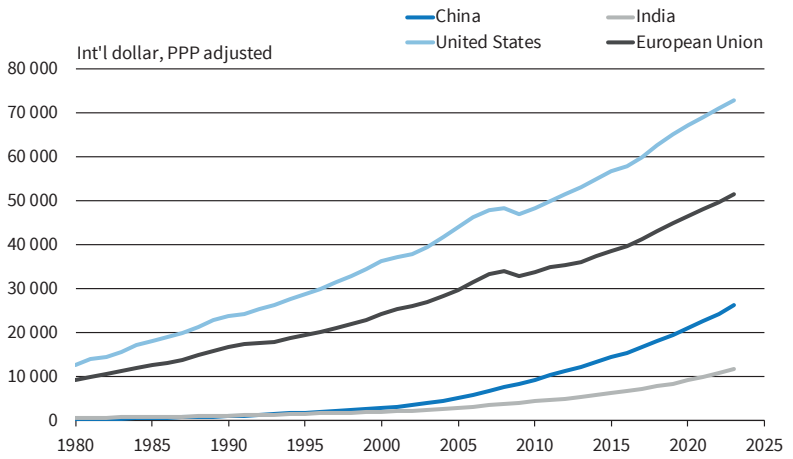
Figure 4.3

Share of World GDP of China, the European Union, India, and the United States since 1980



Source: International Monetary Fund, World Economic Outlook (October 2018). © CESifo

Figure 4.4
GDP per Capita of China, the European Union, India, and the United States since 1980



Source: IMF, World Economic Outlook (October 2018). © CESifo

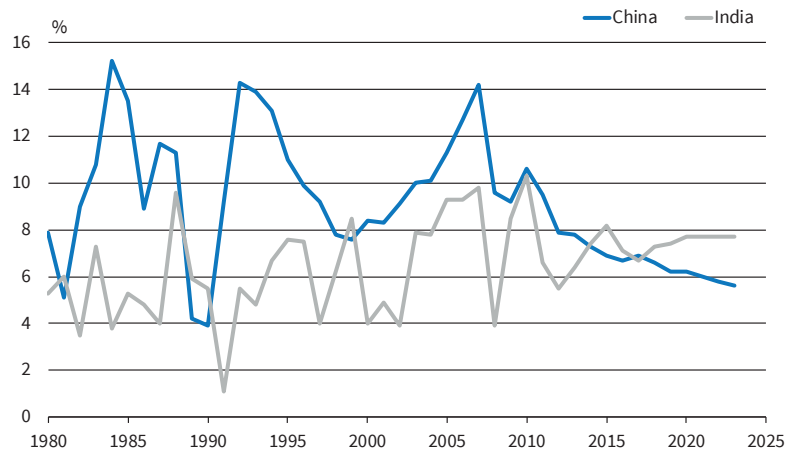
still large, but shrinking. It should also be taken into account that there are huge differences in economic development within China. The most highly-developed provinces have per capita incomes not far off those of advanced countries, while living standards in the less developed provinces are closer to those in developing countries. Of course, this heterogeneity is a feature of most developing and emerging economies and not just China.

Clearly, a key question is whether the economic development of China can continue at the same pace in the future. In recent years, China has experienced a slowdown in growth rates, which is widely expected to continue, but the economy is still growing at rates of around 6 to 7 percent (Figure 4.5). Given the size of Chinese GDP, this is still a very dynamic development.

While there is a consensus that Chinese growth rates will be smaller in the future, the open question is whether the country will continue to catch up in terms of per capita incomes, and how fast this process will be? While the catching up process is widely expected to continue, there are also more sceptical assessments. For instance, in his paper 'Growing and slowing down like China', Zilibotti (2017) argues that China faces a number of challenges that might slow down its growth. He emphasises that China has arrived at a critical point in its economic development, where the catching up process needs to change from 'investment led growth' to 'innovation led growth'. The concept of investment led growth refers to a situation whereby capital accumulation and the adaptation of existing technologies and knowledge is enough for a country to catch up economically. But beyond a certain level of economic development, this is no longer enough. "At this juncture, the focus on physical capital accumulation gives way to human capital and innovation" (Zilibotti, 2017, p. 948). In addition, the state of China's economic per capita income – roughly one third of the leading industrialised countries, is sometimes referred to as the 'middle income trap' (Eichengreen et al., 2014).

The Chinese government is well aware of these challenges. In its 2015 work report, the government explicitly mentions that the country faces considerable challenges and needs to: "avoid falling into the 'middle income trap', and achieve modernisation …".[6] As a result of this insight, the Chinese government has decided to invest heavily in research and science and to pursue an industrial policy strategy called 'Made in China 2025', aimed at developing China's manufacturing sector. We will describe and discuss this strategy further below.

Figure 4.5
Real GDP Growth Rates in China and India since 1980



Source: International Monetary Fund, World Economic Outlook (October 2018). © CESifo

4.4 WHAT IS THE ECONOMIC IMPACT OF THE RISE OF CHINA ON EUROPE?

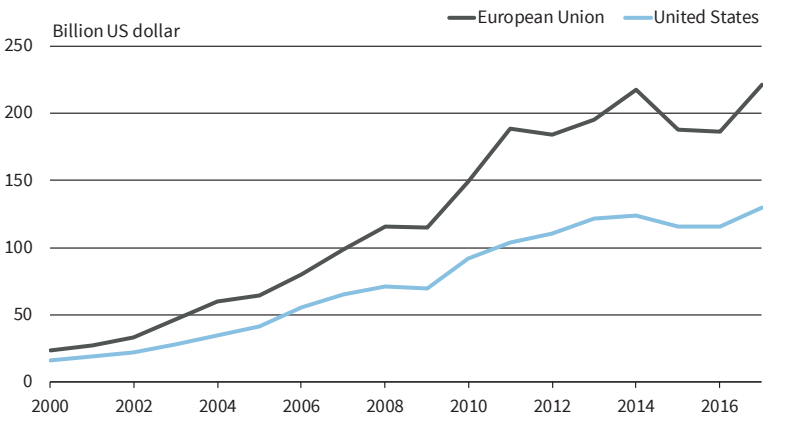
The rise of China affects Europe in many ways – it affects not just the European Union, but also the rest of the world and its relations with Europe. The rise of China has a profound impact on the world economy and on the global balance of political power. The opening up of China has led to the integration of hundreds of millions of people into the world economy. This has led to

[6] Report on the Work of the Government (2015), p. 9.

a huge increase in the supply of labour, but the Chinese population also has a growing weight as a consumer. In the rest of the world the impact of the opening up of China was an initial increase in trade. Later, capital movements moved to the focus of the debate. European and US companies have been active as investors in China for a long time. More recently Chinese outbound foreign investment started growing. A more recent impact is through China's role as an emerging power in science and technology. We will briefly discuss each of these factors below.

Figure 4.7

Exports of Goods and Services of the European Union and the United States to China, 2000–2017



Source: UN Comtrade. © CESifo

4.4.1 Trade with China

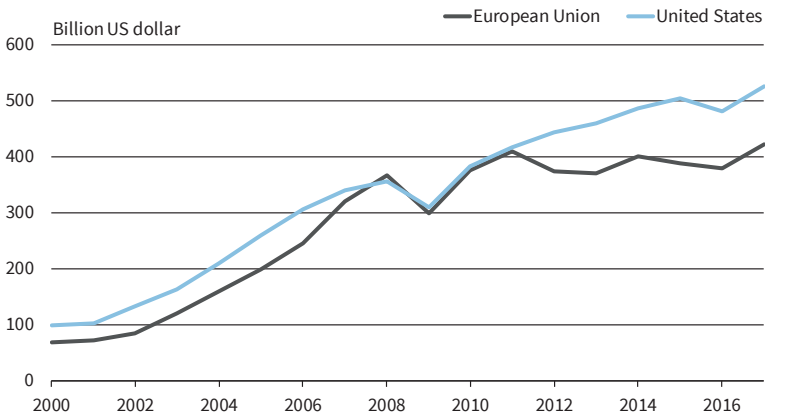
Within a relatively short period of time, China has become the world's largest exporter of goods and services, overtaking big exporters like the United States, Japan, and Germany. Figure 4.6 illustrates the growth of imports from China for the United States and the European Union.

At the same time, China has become the world's second largest importer of goods and services, after the United States. Exports of the United States and the European Union to China are illustrated by Figure 4.7.

The integration of China into global trade has had a profound impact on Europe, as well as the rest of the world. It is one of the fundamental insights of international economics that trade integration will increase global welfare. But the gains may be distributed unevenly and there may be groups in the economy who lose out as a result of trade liberalisation.

Figure 4.6

Imports of Goods and Services of the European Union and the United States from China, 2000–2017



Source: UN Comtrade. © CESifo

The availability of cheap products from China has increased worldwide consumer welfare enormously. But many companies competing with Chinese products have been put under intense competitive pressure, forcing them to restructure or even to shut down. This has led to job losses and falling wages, especially for low-skilled workers in advanced economies.[7]

At the same time, China's imports have created opportunities for companies in other countries. In Europe, for instance, producers of luxury goods, sophisticated machinery and premium cars found new sales markets in China. This protected existing jobs in Europe or led to the creation of new ones. For many companies, the opening up of China also created opportunities by providing cheap intermediate goods.

The gains and losses due to increasing global trade differ considerably not just across individuals and firms, but also across sectors, regions, and countries. There is a growing body of literature investigating how large changes in international trade, like the opening up of China or the transition of the formerly communist countries of Eastern Europe, have affected different workers, sectors, and regions. Various studies on the United States have shown that industries competing with Chinese imports have suffered, as have regions where these industries were concentrated (Autor et al., 2013). Trade liberalisation is also widely considered to

[7] Clearly, trade is not the only – and may not even be the most important – factor leading to the decline of manufacturing jobs and falling wages for low skilled labour. Technological change plays a key role as well. Of course, trade and technological change are interdependent.

be a key factor driving the decline in manufacturing employment in the United States.[8] Autor et al. (2013) refer to these effects as the 'China syndrome'. In a recent study Caliendo et al. (2018) find that the China trade shock led to a reduction of 550,000 US manufacturing jobs. This is equal to about 16 percent of the observed decline in US manufacturing employment between 2000 and 2007. Pierce and Schott (2016) find a link between trade policy changes reducing the likelihood of tariff increases on Chinese imports and the decline in US manufacturing.

Empirical studies for Europe show a slightly different pattern. Dauth et al. (2014) investigate how trade liberalisation with Eastern Europe and China has affected firms and workers in import competing industries in Germany. Their key finding is that the impact of competition from Eastern Europe was stronger than that of import competition from China. The reason is that the pattern of specialisation in German industry was such that imports from China were less of a threat than in other countries. For instance, the textile industry had largely vanished in Germany even before the integration of China into global trade. The other interesting finding is that many German firms were able to benefit from export opportunities created by the liberalisation of trade with Eastern Europe and China. Overall, Dauth et al. (2014) find that trade liberalisation led to a net increase in employment in Germany amounting to 442,000 jobs, suggesting that German workers have been winners of globalisation in recent decades. However, most of this effect is due to trade with Eastern Europe, not China.

Badinger and Reuter (2017) investigate the impact of trade with China and Eastern Europe for regions in 17 Western European countries for the period 1991-2011. Their findings confirm that jobs were lost in import competing regions, while regions with industries benefitting from export opportunities experienced growth in manufacturing jobs. Overall, job gains and losses balanced out. There is, however, considerable heterogeneity across countries. France and the United Kingdom are identified as the countries with the largest losses. Germany, in contrast, also lost jobs due to trade with China, but that was overcompensated for by job growth in firms exporting to Eastern Europe. Of course, the effect of trade on manufacturing employment is only one aspect of the consequences of trade shocks. A key issue is the ability of the economy to generate other job and growth opportunities, particularly in the service sector. Clearly, new jobs in the service sector may be less well paid or require different qualifications and greater flexibility than those lost in the manufacturing sector. In particular, older employees may find it difficult to adapt. Some may also prefer early retirement to moving or retraining.

Overall, the literature on the impact of trade with China suggests that the shock for import competing industries in the United States was stronger and more negative than in Europe. But in both regions the 'China shock' underlines the fact that trade integration creates winners and losers, and these two groups tend to cluster regionally, which means that entire regions or even countries may be winners or losers. It is important to note that the overall impact of increasing trade also depends on the ability of economies to adjust and create new jobs. Different European countries have had very different experiences in this regard (see Chapter 2).

4.4.2 Investment Flows

Trade in goods and services is linked to investment flows, particularly in cases where trade imbalances arise. In general, irrespective of trade balances, capital mobility is another potential source of global welfare gains. Again, the potential for welfare gains through capital movements does not imply that everybody will benefit.

For a long time China was a net capital exporter. That is surprising in so far as one could expect a developing country like China in the 1980s and 1990s, with abundance of labour rather than capital, to import capital from the industrialised world. But the more common empirical pattern is that successful economic development often goes along with a strong focus on exports and regulated capital markets, which limit foreign capital inflows, leading to current account surpluses. This development strategy requires that domestic savings are large enough to finance domestic investment, as well as the current account surplus.

Figure 4.8 shows the development of savings and investment in China since the 1980s. Since the early 1990s, savings have consistently exceeded domestic investment. In recent years the difference, which is equivalent to the current account balance, has declined. However, the many years of surpluses imply that China has accumulated a significant stock of investment in foreign assets.

Of course, the current account surplus only reflects the change in net foreign assets. From an economic perspective, the gross capital flows are at least as important. Since there is considerable foreign investment in China, gross foreign assets held by Chinese investors have also grown.

It is well known that China holds a significant share of its foreign assets in US government bonds.[9] However, it has been part of the explicit economic policy strategy of China for several years to diversify the country's foreign asset holdings. In recent years Chinese companies have become increasingly active as international investors. Figure 4.9 illustrates the

[8] Between 1944 and 2015 the share of manufacturing in US employment declined from 39 percent to 8.6 percent (Autor et al., 2016).

[9] In August 2018 the stock of US government bonds held by foreign investors was 6.2 trillion US dollar, or roughly 30 percent of the overall outstanding debt of the US federal government. 1.16 trillion US dollar were held by Chinese investors, primarily by the Chinese central bank, available at: http://ticdata.treasury.gov/Publish/mfh.txt.

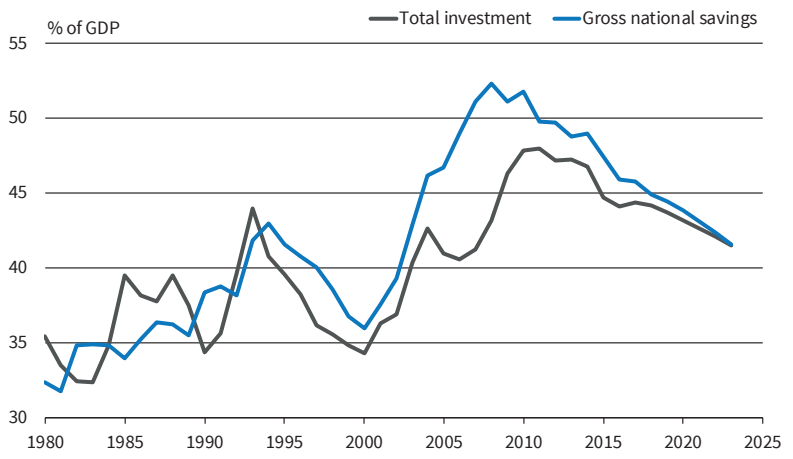
development of China's outbound and inbound Foreign Direct Investment (FDI). Until the mid-2000s Chinese outbound FDI was negligible. In 2005 it accounted for 2.8 percent of China's GDP. By 2017 this figure reached 12.8 percent. Although the volume of FDI in China is larger, it is growing more slowly. In 2005 it totalled 20.6 percent of China's economic output and in 2017 it amounted to 24.3 percent. Its share in Chinese GDP has been roughly constant since 2009. Foreign investment is still growing, but not more quickly than Chinese GDP.

Figure 4.10 illustrates the geographical distribution of Chinese outbound foreign direct investment. Almost three quarters is located in other Asian countries. Only 7.6 percent goes to Europe.

While the volume of Chinese foreign direct investment in Europe is still low, it is expanding rapidly. A large share of this investment takes the form of mergers and acquisitions. Figure 4.11 shows that takeovers of European companies by Chinese investors have increased considerably in recent years.

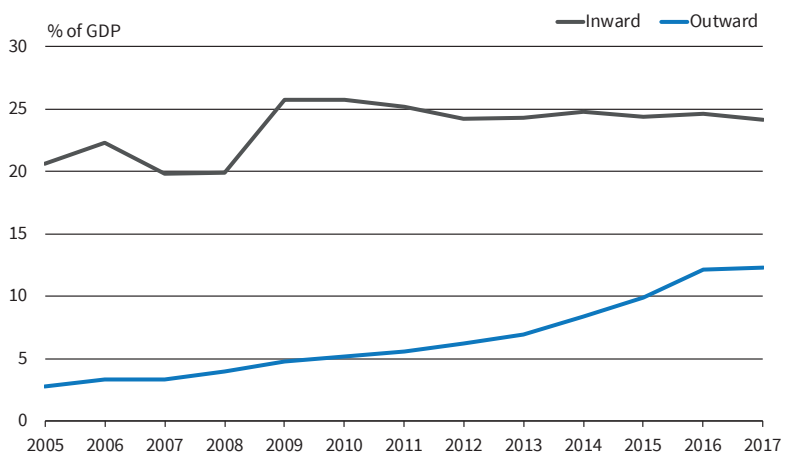
Some of these acquisitions have attracted considerable attention in the public debate. A recent Bloomberg story entitled "How China is buying its way into Europe"[10] reports that Chinese investors have taken over approximately 360 companies since 2008, ranging "from Italian tire maker Pirelli & C. SpA to Irish aircraft leasing company Avolon Holdings Ltd., while Chinese entities also partially or wholly own at least four airports, six seaports, wind farms in at least nine countries and 13 professional soccer teams."[11] In Germany the Chinese takeover of the industrial robot producer Kuka attracted a lot of attention. Chinese investors have also acquired significant stakes in car companies, including Daimler in Germany and Peugeot-Citroen in France.

Figure 4.8
Savings and Investment in China since 1980



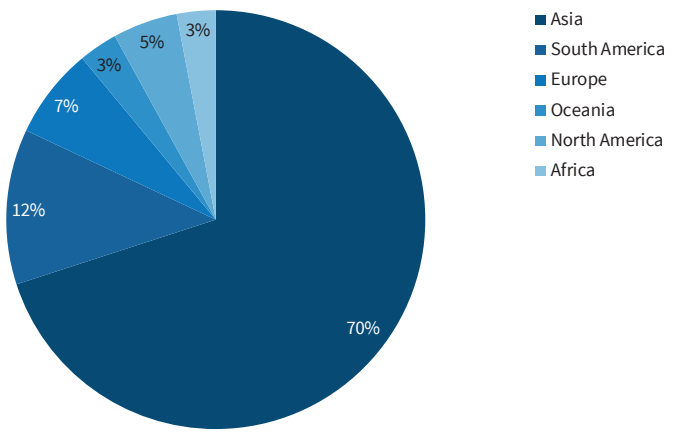
Source: IMF, World Economic Outlook (October 2018). © CESifo

Figure 4.9
Inward and Outward FDI Stocks in China since 2005



Source: OECD, Foreign Direct Investment Stocks Data. © CESifo

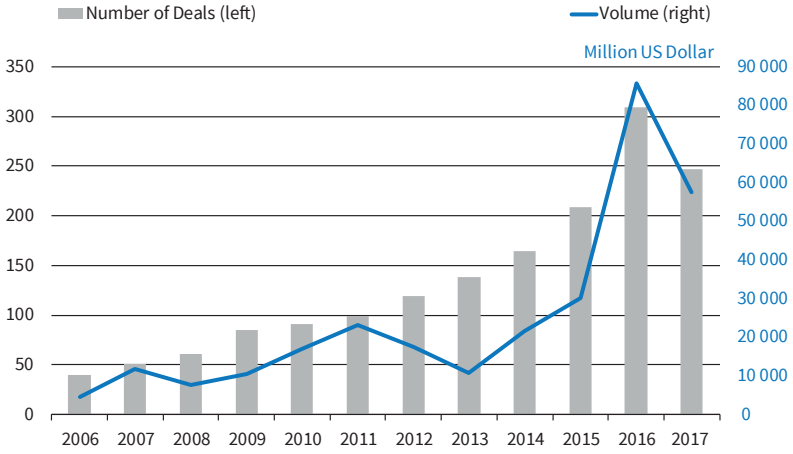
Figure 4.10
Chinese Outward Foreign Direct Investment Stock in 2017



Source: OECD, Foreign Direct Investment Stocks Data. © CESifo

[10] Available at: https://www.bloomberg.com/graphics/2018-china-business-in-europe/.
[11] Ibid.

Figure 4.11
Merger and Acquisition Activities of China in Europe, 2006–2017



Source: Ernst & Young (2018). © CESifo

A further important characteristic of Chinese foreign investment is a growing interest in infrastructure investments. For instance, Chinese state owned companies like the China Ocean Shipping Company (COSCO) and China Merchants Port Holdings have acquired cargo terminals and other facilities or taken over management functions in various ports in Europe including in Malta, Antwerpen, Zeebrugge, and Pireaus. Chinese infrastructure investment in Europe and other parts of the world is often linked to China's 'Belt and Road' initiative, which aims to revolutionise economic exchanges between Asia and Europe by expanding road networks, rail links, ports, and communication and energy networks. China Merchants Port Holdings explicitly points out that its subsidiary Terminal Links "operates a network of terminals with a global reach including Far East, North Europe, Mediterranean, West Africa and North America, among them, Terminals including Malta Freeport Terminal are important hubs along the 'One Belt and Road' layout."[12]

4.4.3 China's Growing Role in Science and Technology

Together with its growing role in international trade and border crossing investment, China has also gained importance as a global player in science and technology. Just two decades ago, China was primarily a producer of low tech goods in the lower quality segment. But this has changed. The government, as well as state-owned and private companies, have made considerable efforts to invest in research and development.

Figure 4.12 shows that the share of spending on research and development is still higher in countries like Japan, the United States, Germany, and even in the EU-28, but China is catching up. Gaining ground in science and technology and eventually taking over a leading role is a key objective of Chinese economic policy.

In 2015 the Chinese State Council launched its 'Made in China 2025' initiative, which it defines as "the country's first ten-year action plan focusing on promoting manufacturing."[13] In his report on the work of the government in 2015, Chinese Prime Minister Li Keqiang summarised the objective of Made in China 2025 as follows: "We will … upgrade China from a manufacturer of quantity to one of quality" (Report on the Work of the Government, 2015, p. 26).

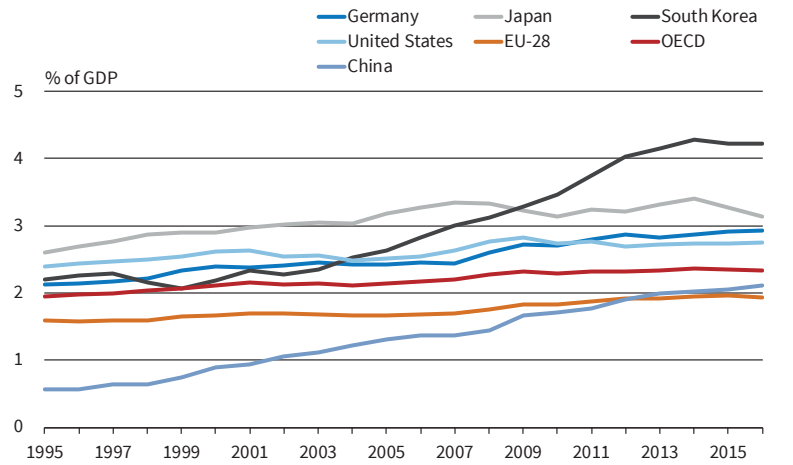
The key elements of the plan are as follows:

"Nine tasks have been identified as priorities: improving manufacturing innovation, integrating technology and industry, strengthening the industrial base, fostering Chinese brands, enforcing green manufacturing, promoting breakthroughs in ten key sectors, advancing restructuring of the manufacturing sector, promoting service-oriented manufacturing and manufacturing-related service industries, and internationalising manufacturing.

[12] Available at: http://www.cmport.com.hk/EN/business/Detail.aspx?id=10000819.

[13] Available at: http://english.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm.

Figure 4.12
Spending on Research and Development for Selected Countries, 1995–2016



Source: OECD Science, Technology and R&D Statistics. © CESifo

The above ten key sectors are:

1. New information technology
2. High-end numerically controlled machine tools and robots
3. Aerospace equipment
4. Ocean engineering equipment and high-end vessels
5. High-end rail transportation equipment
6. Energy-saving cars and new energy cars
7. Electrical equipment
8. Farming machines
9. New materials, such as polymers
10. Bio-medicine and high-end medical equipment.

The country should also further open up its market and attract foreign investors to invest in key areas, such as the development of new information technology and bio-medicine, and foreign companies and institutions should be encouraged to set up R&D centers in China."[14]

China's efforts to invest in research and development and to upgrade its large manufacturing sector have given rise to a number of concerns in other countries. Foreign companies have pointed to the risk that 'Made in China' may lead to more protectionism and import substitution. At a more fundamental level, there are growing fears, particularly in the United States, that China may overtake others and become the leading country in science and technology, with far reaching economic and geopolitical implications. In Europe the debate is generally more positive and recognises that the rise of China generates not only risks, but also significant opportunities.

4.5 POLICY IMPLICATIONS FOR EUROPE

How should the European Union react to and adapt to the changing external economic and political conditions described in the preceding sections? We have discussed three important developments. The first is the shift in US policy towards protectionism and away from rule-based international trade as represented by the WTO as well as the growing US critique of Europe's inadequate contribution to common defence efforts, and particularly to NATO. The second is the necessity of dealing with the United Kingdom as an external partner after Brexit. The third is the rise of China.

Those who advocate "more Europe" argue that individual EU member states are too small to play a role at the global level. Here the idea is that Europe can only be successful if it is united and speaks with one voice. This suggests that member states should shift responsibilities to the European level.

Critics point out that greater centralisation of political decision making is incompatible with effective democratic control, that it will fail to do justice to the diversity of Europe and that it would only undermine political support for the European Union.

Clearly, different EU member countries will have rather different perspectives on the pros and cons of deeper economic and political integration. Those member states who have done well economically may be more likely to favour intensified economic integration. Those doing less well may ask for more political integration, in the hope that this will lead to greater redistribution. Yet others may expect little from "more Europe" and reject both.

There is a large body of literature in economics that discusses the advantages and disadvantages of decentralised versus centralised decision making in federations and confederations like the European Union. The advantages are primarily economies of scale in the provision of public goods and the internalisation of spill-overs. The advantages of decentralised policy making are that the political process is closer to the citizens; that decentralisation allows for learning from policy experimentation; and that differences in preferences across regions or countries are more likely to be taken into account.

In addition, whether centralised or decentralised policy making is preferable also depends on the quality of economic policy making. Those who think that governments tend to tax and regulate too much largely favour decentralisation, because mobility across borders leads to inter-jurisdictional competition and limits the powers of governments. Of course, mobility across borders itself depends on joint policies. Those who think that governments primarily do desirable things and correct market failures tend to reject intergovernmental competition caused by the mobility of resources. Clearly, the perception of the quality of government both at the national and the European level is likely to differ across EU member states.

How does the optimal degree of centralisation and decentralisation change as a result of changes in the external environment? Does the rise of China, Brexit or the decline of US leadership in security policy require the European Union to centralise or decentralise?

For some policy areas the answer seems straightforward. International security and military protection can be seen as an international public good. If the US supplies less of this good and Europe can do nothing about this, the rational answer for the European Union is to supply more. Since there are massive economies of scale in this policy area, the conclusion is that "more Europe" in defence and foreign policy is needed. This would, of course, come at the price of reducing scope for individual member states to pursue their own foreign and security policy. But if it is correct that even countries like France do not have enough weight to be effective as a geopolitical, or even a regional power, this price is small.

[14] Available at: http://english.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm.

In other policy areas, and particularly in economic policy, the optimal reaction to changes in the international environment is less straightforward. In the following we will discuss the policy implications of these changes with respect to a) international trade, b) policies vis-a-vis foreign investments, and c) policies regarding technology, research, and innovation.

4.5.1 International Trade and the European Union

Trade policy is a competence of the European Union because the EU's internal market implies that trade with the rest of the world cannot be done at the level of the member states.

The shift of US trade policy towards protectionism and bilateral trade deals and away from multilateral and rule-based trade in the framework of the WTO implies that the European Union will need to defend its trade interests in an increasingly volatile environment. In a world where trade policy is dominated by the interests of exporters and import competing companies and their employees, leverage in the form of a large domestic market is of key importance.

Brexit will diminish the size of the EU's internal market, but this market will still be one of the two largest in the world, next to that of the United States. Controlling access to this market gives the European Union leverage to ensure that other large markets remain open for European exporters. However, this can only be achieved if the European Union acts in a consistent manner. Commercial policy is a competence of the European Union, but trade and investment treaties often have implications for other policy areas. If trade agreements require ratification by the member states, there is a risk that the European Union will lose its ability to act. Individual countries may exploit veto rights or demand side payments; and the European Union as a whole may lose the ability to defend its interests consistently.

How should the European Union deal with the structural change induced by international trade? The fall of the iron curtain in 1989 and the opening up of China gave rise to trade-shocks that are fairly unlikely to be repeated. But the emerging economies continue to develop rapidly, and pressures to adjust to changing conditions in world markets will not go away. To the extent that this adjustment process involves economic policy reforms, the role of the European Union is limited, as explained in Chapter 2.

4.5.2 Policies towards Foreign Investment

Europe and the European Union have a long history of being open to foreign investment. Should this change just because Chinese investments are becoming more important? If there are reasons to regulate foreign investment, a key question is whether the European Union needs to act; or whether this can be left to the member states. In principle, capital mobility is a key ingredient of the European internal market. This would suggest that the European Union should be responsible for the regulation of foreign investment in the European Union. But as a matter of fact, the European internal market is still fragmented when it comes to investment. The regulation of FDI is currently a responsibility of the member states.

China's growing investment activity abroad, not just in Europe, is arousing widespread suspicion. To some extent this is reminiscent of the reaction to growing Japanese foreign investment in the 1980s. Yet, there are a number of perfectly legitimate reasons for Chinese investors to be active abroad, including in Europe. Firstly, it is well known and perfectly understandable that China wants to reduce its exposure to the US dollar and US government bonds. Secondly, a growing number of Chinese private investors are trying to accumulate assets abroad to diversify their portfolio; and possibly to protect themselves against potential seizure by China's government. Thirdly, Chinese companies are trying to improve the distribution channels for their exports through the acquisition of foreign companies. Fourthly, China is trying to protect its access to commodities. Fifthly, Chinese investors are buying technology companies to acquire know-how. This is an explicit part of its 'Made in China 2025' strategy, which aims to upgrade the country's manufacturing sector.

In principle, these reasons closely resemble the incentives driving investors in Europe, the United States or anywhere else. There are concerns about foreign investments when it comes to the acquisition of companies owning technologies that are relevant for defence or other aspects of security, but that is again a general concern, not just one related to Chinese investors.

A major difference, however, is that when companies or individuals from China make investments, it is harder to recognise whether a private investor is behind the deal, or whether the Chinese government is involved. The reason is that the separation between the private and the public sector in China is less clearly defined than in most other countries, even if that separation is often blurred in western market economies, too. It is clear that the Chinese government is frequently involved when Chinese investors buy companies abroad. Many Chinese investors are state-owned companies. But even in cases where private companies invest, the Chinese government is likely to be involved. One should also take into account that the Chinese banking system is almost entirely state-owned. To the extent that Chinese private investors finance foreign investment via domestic banks, the public sector is inevitably involved. This raises a number of issues.

At a very general level, it is a widely shared principle in international economic relations that companies and investors from all countries should ope-

rate on a level playing field. Governments should not subsidise their investors because this would give them an advantage over their competitors. This type of advantage is widely considered to be unfair; more importantly, at least from an economic point of view, such subsidies could lead to economic distortions and welfare losses. Given this, governments should refrain from using taxes, subsidies, or other policy instruments that could distort international trade or capital flows. Of course, a country can only comply with this principle if its economy has a well-defined private sector that is distinct and separated from the public sector, a separation which characterises a market economy, but not a communist country. There is a long debate related to China's WTO membership over whether or not China can be considered as a market economy. WTO rules imply that the market economy status of a country is relevant for the scope of measures that other countries may take if they think there is a case of unfair trade practices. Of course, public policies influence the competitive position of private companies in many ways, and many, if not all countries, including western market economies, use these instruments extensively.

However, beyond the general issue of whether or not there is a level playing field for investors from different countries, the debate over foreign investment largely focuses on the more specific issue of technology transfer. A widely discussed recent example is the Chinese takeover of the German robotics company Kuka. This takeover triggered a debate over whether acquisitions of high tech firms should be regulated to prevent economic disadvantages for the domestic economy. In principle, companies who own valuable patents or have a technological advantage over their competitors can be expected to be correspondingly expensive. If Chinese companies, backed by the government, outbid interested parties from other countries, they might end up paying more for the firm in question than it is actually worth. Other bidders may be unhappy about that, but from a policy perspective there is no apparent reason to prevent Chinese investors from buying overpriced companies.

But this interpretation of events could also be naïve. It could be risky for a European or US company with a presence in the Chinese market to compete against a Chinese bidder in a takeover. European or US bidders may worry that the Chinese government could block their market access in China. This would imply that government support to Chinese investors does not lead them to pay too much; they might also pay too little. This type of concern is less relevant in the case of acquirers from countries with a clearer separation between the government and the private sector than in China.

In addition, the takeover of a technology company and changes to its research and development activity may have external effects which are, by definition, not reflected in the purchase price. These externalities may take the form of positive local spillovers caused by the presence of a research lab in a location where other companies have similar activities. If one firm leaves as a result of an acquisition, the productivity of the others may decline. Alternatively, if a company has knowledge of other firms in the sector, selling this knowledge may have consequences for the competitive position of these companies. Of course, this is a concern that applies to any takeover, not just cases where the investor comes from China. What does this imply for public intervention? Governments could, in theory, block takeovers in cases where the foreign acquisition has negative spillovers on the domestic economy. It is worth noting, however, that takeovers may also generate positive effects on the rest of the economy. Investors may, and often do, bring with them new technologies or better management practices. For purposes of practical economic policy, it is very difficult – if not impossible – to determine which type of spill-over prevails on a case by case basis.

Another controversial issue is whether more regulation of Chinese infrastructure investments in Europe is needed. These investments are criticised for two reasons. The first is the concern that security risks may arise if investors controlled by foreign governments operate critical infrastructure. This is not very convincing. For instance, if the Belgian government thinks that the container terminal in the port of Zeebrugge is not being operated as it should be, it could expropriate Chinese investors or neutralise them in other ways. The second critique is that, particularly in poorer EU member states, infrastructure investment might allow the Chinese government to buy political influence in the country and, through that country, influence the political decisions of the European Union. Many EU decisions call for unanimity among its members. That makes the European Union particularly susceptible to attempts to divide it by outsiders. NATO's former Secretary General Anders Fogh Rasmussen recently criticised several EU states that have received Chinese investment for watering down an EU declaration made in summer 2017 that decried Peking's claims to maritime rights and resources in the South China Sea as a violation of international law.

Whether Chinese investment really buys political influence, and whether this political effect is linked more to infrastructure than to other types of investment should be investigated more deeply. But it is clear that the European Union cannot allow China or other players to cause rifts in the European Union in order to manipulate political decisions. This not only applies to foreign and security policy, but also to economic policy.

Another, more straightforward reason for the European Union to regulate inbound FDI from countries like China is that European investment in China

is also regulated heavily and subject to many restrictions. If the European Union wants better market access for its companies, it will need to use access to the EU's market as leverage.

What are the implications for public policies towards foreign investment in Europe, and how should responsibilities be divided between the national and the European level? Currently, 13 EU member states have national mechanisms for screening inbound foreign investment and reserve the right to restrict these investments.[15] These mechanisms usually focus on security issues, some include additional aspects.[16] Countries outside the European Union often have similar procedures. In the United States the 'Committee on Foreign Investment in the United States' (CFIUS) screens foreign investments, focusing on their implications for national security.[17]

Should all EU countries have investment screening mechanisms, and is there a need for action at the European level? Recently, the European Commission proposed the introduction of a European screening mechanism, which would build on and extend national procedures (European Commission, 2017). Essentially, all member states would screen foreign investments and inform the European Commission and the other member states. The European Commission would investigate the takeover bid and issue an opinion. The final decision would be taken by the member state. What are the criteria that would guide the screening? Article 4 of the regulation proposed by the Commission[18] puts this as follows:

"In screening a foreign direct investment on the grounds of security or public order, Member States and the Commission may consider the potential effects on, inter alia:

- Critical technologies, including artificial intelligence, robotics, semiconductors, technologies with potential dual use applications, cybersecurity, space or nuclear technology;
- Security or supply of critical inputs; or
- Access to sensitive information or the ability to control sensitive information."

In determining whether a foreign direct investment is likely to affect security or public order, Member States and the Commission may take into account whether the foreign investor is controlled by the government of a third country, including through significant funding."[19]

Is this an appropriate way of dealing with foreign investments including investments coming from China? There is no doubt that foreign takeovers may have border crossing spill-overs and implications for joint policies at the European level. Foreign investment is also closely related to the area of commercial policy, which is a responsibility of the European Union. Thus, action at the European level is justified. There is also a consensus that one of the objectives of European investment policy should be to achieve reciprocity – the treatment of European investors abroad should be equivalent to the treatment of foreign investors in Europe. In China, for instance, domestic market access for Chinese companies, and particularly for state-owned companies, is clearly better than for foreign investors. It should be one of the objectives of the EU's investment policy to remove this discrimination.[20] The chances of achieving this through uncoordinated action by individual member states are small if not zero. The European Union has the necessary leverage to make progress in this area.

There are certainly a number of risks in this screening process. Firstly, the decision-making process is complicated and will take time. Secondly, since the final decision is made by the member state where the acquisition takes place, it is at least an open question whether the process will lead to decisions that are efficient for the European Union as a whole; and not just for individual member states. Of course, compared to the status quo, where screening does not take place at all, or only at the national level, the new procedure would make it more likely that common interests were taken into account. Thirdly, every political screening process is prone to lobbying. Combined with the fact that the criteria for the screening are rather vague and offer ample room for interpretation, there is a risk that final decisions may be influenced by special interests. Of course, lobby influence also exists in purely national screening processes. Fourth, Article 3 of the proposed regulation states that not just the member states, but also the Commission may screen foreign investments. How that fits into this decision-making process, and particularly whether the member states will have the final decision right in these cases too, should be clarified.

Overall, the case for a European screening mechanism along the lines of the Commission proposal is strong. Emphasis should be placed on keeping the process as simple and as transparent as possible. The European Commission should take the initiative to formulate a common EU foreign investment policy with the objective of achieving reciprocal treatment

[15] Available at: http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc_156040.pdf.

[16] Detailed information on national screening mechanisms is available here: http://www.europarl.europa.eu/RegData/etudes/BRIE/2018/614667/EPRS_BRI(2018)614667_EN.pdf.

[17] Recently the scope of the screening was extended through the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA), see https://home.treasury.gov/policy-issues/international/the-committee-on-foreign-investment-in-the-united-states-cfius.

[18] Proposal for a Regulation of the European Parliament and of the Council establishing a framework for screening of foreign direct investments into the European Union, available at: https://ec.europa.eu/transparency/regdoc/rep/1/2017/EN/COM-2017-487-F1-EN-MAIN-PART-1.PDF.

[19] Ibid, p. 20.

[20] See García-Herrero and Xu (2017).

of European investors in foreign markets, including China.

4.5.3 Policies on Technology, Research, and Innovation

Economic growth and prosperity is largely driven by the creation and dissemination of knowledge and new technologies. This is why policymakers in all advanced economies emphasise human capital formation, research, and innovation. This is also true for the European Union. In the EU 2020 strategy one of the targets is to increase gross domestic expenditure on research and development to 3 percent of GDP in all member states. Nevertheless, there is a widespread view that the European Union needs a more consistent strategy in research and technology policy to sustain economic growth. To date only two out of 28 member-states have reached the 3 percent-target for R&D spending (see Figure 4.13).

There is a growing concern that the United States and China will be the leading powers in technology and science and that the European Union will fall behind. China's industrial policy initiative 'Made in China 2025' is often referred to as an example of a clear and focused industrial policy strategy, implying that something similar is lacking in Europe.

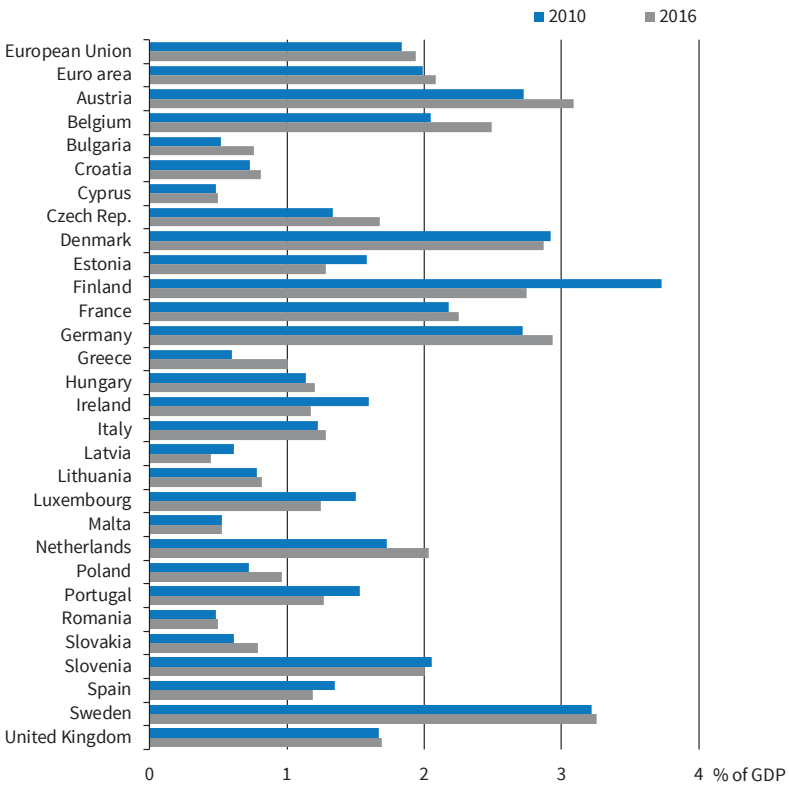
At the same time, industrial policies that pick specific sectors, technologies or even firms, to be growth drivers of the future face the problem that neither governments nor anyone else knows which sectors or projects will be future winners. The idea that governments or industry leaders can 'pick winners' is a pretence of knowledge. From this perspective, governments should finance basic research, create a favourable environment for entrepreneurial innovation, and create room for diversity and experimentation. Governments may also need to supply or coordinate the creation of complementary infrastructures for new technologies. For instance, one of the impediments to the development of e-mobility is the lack of infrastructure.

For the European Union all of this would imply that its role in science and technology policy should primarily be to encourage border-crossing research cooperation and exchange. The uncoordinated industrial policy approaches of individual member states can be seen as a field of experimentation where the most promising approaches will flourish.

In many areas this decentralised approach can be successful. But there are also fields where it does not go far enough. Firstly, there are projects in research and development where scale is crucial, sometimes simply due to high costs. One example is the nuclear fusion reactor project ITER located in Southern France. The project is simply too large for individual countries. It is financed by thirty five nations, including not only the European Union but also the United States, Russia, and China. The example of ITER suggests that even the European Union may be too small for certain types of projects; but the European Union can do more than the member states. Secondly, in cases where research and development has a clearly defined objective like a specific application of a technology, uncoordinated research may lead to duplication and be wasteful.[21]

Thirdly, there may be cases of strategic interaction among countries or blocs of countries. Suppose a country like China focuses on achieving leadership in a specific technology like artificial intelligence or electric mobility. Assuming that individual EU member states are too small to compete, what is the optimal response of the European Union? One option is to do

Figure 4.13
Research and Development Spending in the European Union



Source: OECD Science, Technology and R&D Statistics.

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[21] One should take into account though that competition among researchers is an important driver for innovation and success in research. Therefore duplication should only be an issue when it comes to very specific and clearly defined research and development processes.

nothing and either expect that individual member states compete; or accept that China will lead the development of this technology. This may imply that China also defines industry standards in this area in a way that gives Chinese companies a long-term competitive advantage. But the European Union may invest in other technologies. Alternatively, the European Union may compete, invest heavily, and try to win the race for the new technology and the standard setting. This may be very costly and there is no guarantee of success. Yet, another strategy may be to focus on other fields, but make sure that frontier technologies developed in China will be understood by European companies and researchers and can be adopted quickly in Europe.

After all, it should not be overlooked that scientific knowledge has the attributes of a public good. Being at the frontier of technological development and innovation is costly. In some fields it may be more efficient to invest in the ability to adapt technologies developed by others, participate in the design of industry standards and the application of the technology. Acemoglu et al. (2017) suggest that adaptation and imitation can be as successful economically as a strategy that leads to technological leadership. In the important area of standard setting, which is closely linked to research and development but not the same, the European Union should also be active and alert about processes in other countries. In many cases this could be an area where cooperation with the United States would be fruitful.

It should also be taken into account that many new technologies imply heavy investment in intangible assets and cost structures where fixed costs are high and marginal costs are low or close to zero. The digital economy is a good example. In such a setting, countries or companies investing heavily to introduce new technologies face the risk that other countries use tax and regulatory instruments to capture part of the rents generated through the sale of the product or service in their home market. This problem is very familiar from pharmaceutical regulation. The development of new drugs and therapies has very high marginal costs, and price regulation for drugs needs to give companies a margin to recover their fixed costs. Providing this margin and preserving the incentives for research and development can be seen as an international public good. Small countries in particular have few incentives to contribute to the provision of this good. Another example is the EU initiative to introduce a turnover tax on digital services. If marginal costs are zero, turnover taxes are fully shifted to producers; and their effect is similar to a lump sum tax on profits.

These considerations suggest that the EU's science and technology policy should not necessarily join contests about who will be first to develop specific technologies, but ensure that European researchers and companies are involved in the process of developing these technologies, and will be able to adapt and apply them quickly if others develop them first. The second focus would be to create an environment in Europe that favours entrepreneurship and innovation. Here the deepening of the European Internal Market is a key challenge. To be successful, many innovations need a large market, so that new products or business models can quickly reach sufficient scale. The availability of a deep capital market is another key ingredient. Thirdly, more needs to be done to improve border crossing infrastructure networks for data, telecommunication, energy, and transport.

4.6 CONCLUSIONS

The external environment in which the European Union operates is changing markedly. Relations with the United States have been shattered as a result of the policies of Donald Trump. This may not be a permanent change, but hoping that US policy towards Europe will return to normal after the next US presidential elections may be optimistic. If Brexit happens, and particularly if there is a hard Brexit without a withdrawal agreement, relations between the United Kingdom and the European Union will be damaged seriously and both sides will pay a high cost. At the same time, Europe faces an increasingly influential China, which is becoming more assertive politically and economically. Its growing markets and rising middle classes provide opportunities for European producers and exporters. But its advancing technical knowledge creates challenges. Meanwhile, Europe is being challenged by the populist and nationalist turn taken by the United States under the presidency of Donald Trump; and by the emergence of similar tendencies in several European countries. The European Union is one of the remaining bastions of the rules-based, multilateral, international order. It needs to make common cause with like-minded partners such as Japan, India, Australia, Canada, South-East Asian nations, and, as far as possible, China.

The shift in US policy towards protectionism and its (justified) demands for a greater contribution of its European allies to NATO's defence effort imply that Europe needs to do more. Using synergies offered by common EU defence policies would be highly desirable.

Brexit will diminish the size of the European internal market, but there are strong incentives for both sides to continue to cooperate. To make this possible, it is of key importance to avoid a hard Brexit.

The rise of China and the growth of trade and capital flows offer enormous potential for economic gains for both sides; but growing economic exchanges also require the ability to adjust. The European Union needs to be in the position to use access to its internal market as leverage to maintain open markets for its companies in the United States, China, and worldwide. The European Union needs a more con-

sistent approach to dealing with foreign investment. The European Union should remain open to foreign investment, one of the side effects of which is that deep mutual relations through investment reduce the likelihood of political or military conflict. But foreign investors' access should be linked to the reciprocal treatment of European investors in the relevant partner country.

Investments made by Chinese companies with opaque relationships with the Chinese state, such as Huawei, for example, may present risks to security, and it is appropriate for member states and the European Union to anticipate these risks. The new European framework for screening FDI is a step in the right direction. It is important that it does not become too bureaucratic and slow. The criteria for intervention should be specified more clearly. Currently, they are so vague that the procedure may be prone to lobby influence and protectionism.

The rise of China as a leading power in science and technology, combined with the introduction of new standards in the application of new technologies, may threaten the competitiveness of European companies. The European Union should not necessarily engage in races for dominance in particular technologies, but it should ensure that European companies and researchers are sufficiently involved in the development of key technologies to facilitate their speedy adaptation. The European Union needs to do more to create favourable conditions for progress in science, technology, and innovation, deepening the internal market, including capital markets. Improving border-crossing networks for data, communication, energy, and transport should be a priority.

The European Union will only be able to deal with these challenges successfully if its member states are willing to cooperate more and pool their sovereignty in fields where individual action is not enough.

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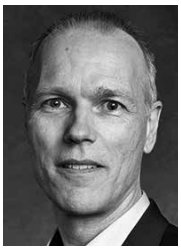

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